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ILLUSTRATIONS.

New Buildings for the Belfast Academy, at Cliftonville (Double-page Engraving).—Messrs. Young & Mackenzie, Architects.

St. Eustache, Paris: Commenced A.D. 1532 (Double-page Engraving).—Drawn by H. W. Brewer; Engraved by A. Berry.

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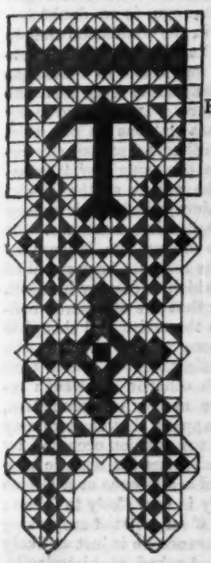


The Work of the Architect.

THE tribute, on the completion of a public building, that is sometimes borne by men who view the case from a business standpoint, to the service which it is in the power of the architect to render to the smooth working of the wheels of the social machine, has far more interest than that which attaches to the design of any single building, however important. It leads the reflective mind to contemplate the great problem of the position of architecture, not only as an art, or even as an art associated with structural science, but as one of the most powerful factors of civilisation.

From this point of view, the triple association of architecture with sculpture and painting, however those who use the expression may be disposed to give the primacy to the constructive art, is wholly inadequate; and, as such, may readily prove altogether misleading. There is a sense in which that classification is a good one. It is that which regards the study of architecture as a dead language instead of as a living tongue. We do not wish to adopt the fashionable slang of speaking of one art, or of one study, in the technical terms proper to another. We have seen too much of this of late, and the tendency of such a style of writing we regard as almost wholly mischievous and confusing. But there is something more than analogy in what we wish to indicate. If we take the word "language" in its broadest sense, as meaning the expression of sentiment or of purpose, we find it to include not only speech and song, but all the productions of art. In this sense the architecture of a nation, or of an age, no less than its grammar and poetry, may be called a portion of the language of the time. As such it has the advantage of being a very permanent portion, and one to the relics of which, where they exist, we can refer with a certitude that is wanting in the case of most ancient literary memorials. Looking at the architecture of the past in this light, its study is very much akin to that of what we call a dead language. The utilitarian may ask,—"Why should I trouble myself to understand the rules adopted for building temples in Greece more than 2,000 years ago? What is the practical utility of such a study? Climate is different, customs are different, religion is different, materials are different. Mathematics have made an immense advance; and our knowledge of structure as a science is altogether different from that pursued by any Grecian or Roman architect. Why lose our time in inquiring about what was done by people who, in so many respects, were barbarians compared to ourselves? Let us spend the time of our students in teaching them structure, sanitary laws, distribution of materials, economical requirements, and so on. Let us make them good house-builders, not pedants who know more of the Athens of Pericles than of the London of to-day."

This line of argument is the same as that which is taken by many well-meaning men, who, not themselves having had the advantage of a classical and liberal education, propose the discontinuance of the study of classical literature, which they wish to be replaced by that of modern languages and modern sciences. But the man of richly-stored mind and perspicuous judgment is aware that architecture, as an art, is first to be studied in the orders as well as, in the second place, in the noble relics of Christian Pointed architecture. It is in this part of the education of the architect that he is introduced to the other sister arts as such. The study of the architecture of Greece,—at present scarcely of any use to the mere imitator,—is the best expedient known to us for the development in the mind, not only of a chastened and severe taste, but of the very rudimentary conception of taste itself, as distinguished from caprice or from fancy. The study of Classical architecture has, no doubt, something to answer for. Why is it that on every new line of cheap, pretentious, and probably "scamped" buildings we are presented with the caricatured unlikeness of the orders? It is because the study of Classical architecture has been imperfect and perfunctory, not because it has been fundamental. The difference between regarding such a building as the Parthenon, or the temple of Neptune at Pæstum, as a noble poem of an age when men were all, to some extent, poets, and looking at it as a pleasing elevation, to be advantageously reproduced in miniature for a school-house or a working-men's institute, is essential. The man who has entered into the spirit of the past will never profane the memory of these priceless relics by vulgar and inappropriate imitations.

Regarding the architect as an artist, it is by the study of architecture as a fine art that his education must commence. But it is not as matter of what we call freehand draughtsmanship that the great examples of the past are to be regarded. They are, in the true sense of the word, canons. Even in sculpture, as we have before taken occasion from our own measurements to remark, there exists an accurate and minute proportion of detail which is the special signature of the grand period of Grecian sculpture. So it is with Grecian architecture. The subtlety of the proportions is something which mocks imagination. How they were reached we know not. All that we do know is that, in most cases, they cannot be departed from without manifest deterioration. Thus not only has the primary conception of the grand, the noble, and the fit, to be sown and cultivated in the mind by the study of the dead language of Greek art, but exactitude of details and sense of the subtle delicacy of proportion are to be induced by the same study. Science, in fact, is concealed under the grandeur of ancient art. Or, rather, the science of the artist invests the beauty of his work with a subtle charm, which can only be compared to that of the invisible perfume of a flower.

When the poetic faculty is thus formed or developed in the architect, he has to open an altogether different chapter of study. He has now to pass from the studio of the artist to the office,—to the forge,—to the mine,—to the workshop. He has to look at a building no longer as a poem; he has to study it as a problem. He has to reverse his former mode of work; and this reversal will be easy and happy in proportion to the thoroughness of the former part of his education, always supposing,—which must not by any means be taken for granted,—that the student is a man capable of this kind of education. He formerly had to ask, "Why is this so?" If he has learned this part of his lesson aright, it will be more easy for him to reply to the next part of his catechism, "How is such an object to be called out?" Instead of a visible building, which he has been taught first to admire, and then to analyse, the architect is presented with a great want. He may have,—he most often has,—a site selected for some non-architectural reason. Here is a vacant spot, in town or country, to be utilised. The owner wants it to be utilised in a particular way,—for abode, for commerce, for public science, for utility. The first thing presented to the architect is a need which he is called on to supply.

In this respect we think that the resolutions of the Italian engineers and architects, to which we recently called attention, show that a great and a very wholesome reform is proceeding in that delightful country,—the land which is the cradle of engineering, and, at all events, the nursery of architecture. The Italians, who, of all people in the world, have been in the habit of referring most implicitly to "the rules of art," have now taken the lead in the bold enunciation of the principle that purpose ought to be the inspiration of design. And if we are to hope to see a fresh Renaissance, and the development of an architecture which, inspired by the grandeur and the beauty of the past, shall draw a new grandeur and beauty from the facilities offered by science and by new materials to the workman of the future, it can only be by the full appreciation of the truth of this primary canon. What is required of the architect is not a pale and feeble imitation of something that was appropriate to the wants of mankind three or four centuries ago, but a production of that which is required by the wants of the social order of to-day.

It is here that the architect, if he rises to the height of his calling, comes to the fore as a civilising force. To build a great hall, or a

noble corridor; to place a window that shall glow richly in all the glory of stained glass; to match a moulding from the *Campo Santo*, or a pinnacle from the *Sainte Chapelle*,—all this is but elegant trifling. It is far more rare to commence by a rude but instructive diagram of the wants which have to be supplied.

It is in such a case as this, in fact, that the architect comes in direct contact with the most essential element of structural change. We now speak of this change as affecting plan and distribution of building, not as regarding method of execution. That great element is the constant growth of population. If population were stable, architecture might be stable also. The effects of the natural agency of time would require, in due course, restoration and repair. But as a rule, building that would have suited the purpose of a population distributed at the rate of 250 to the mile two or three hundred years ago, would not be altogether unfit for the same purpose now. Whence does the inconvenience arise to remedy which the sanitary reformer invokes the aid of the legislator? It is easy to reply in one word,—over-crowding. The cottage that might be a little paradise to a newly-wedded pair, attended on by a single servant, becomes intolerably cramped, and even dangerously unsuitable, as a bouncing family of a dozen or more boys and girls makes its timely and welcome appearance. As it is in the house so it is in the town. As it is in the town so it is in the public building. How many of our readers can remember the rustic and rural simplicity of numerous snug little houses in the vicinity of the Edgware-road and the Regent's canal, that are now grimy and out of place in the centre of a thick population? Who can now remember when Westbourne-grove was a grove? The expansion of our population is as irresistible as is that of metals by heat, and although it may at times be lamented that juvenile citizens make their appearance before due provision has been made for filling the additional mouths, it must never be forgotten that in this elastic growth of population lies one main element of national welfare. In many parts of the world the contrary action is going on. The Red Indians are vanishing from their ancient haunts, under the pressure of immigration from Europe, and of the growth of the now mixed American race, and poisoned by the fatal "fire-water" of the white man. Whole districts of Africa are becoming depopulated. Intestine strife, in many parts of the nominal dominions of the Sultan, is yearly thinning the population at a rate that goes far to explain the ugly riddle of the desolation of the valley of the Euphrates, once the teeming cradle of the human race. Even France,—civilised France,—is receding in her proportionate numerical strength, and losing her due preponderance in Europe, for want of the fertile production of Frenchmen. The birth-rate in the German empire, according to the latest returns, is 4·03 per cent.; that of Austria, is 3·91 per cent.; that of England, 3·62 per cent.; but in France the birth-rate has sunk from 2·69 per cent., in 1868, to 2·53 per cent. in 1878; or by 6 per cent. in ten years. It is clear that the architect who is called on to provide for the wants of a people increasing at the higher rate has to look at the solution of problems of an order that will not occur to him whose lot is cast around a stationary or a receding population.

Wisely to provide for the normal increase of the people for whom he builds may thus be considered as one of the first aims which the architect should keep present to his imagination. Nor do we think it can be doubted that such a view of his duty would impart an elevation to his style. A certain magnitude of scale will gradually impose itself on the designer. He will be naturally driven anew to consult the examples left by those masters of his art who dealt with large multitudes. We may refer to the one question of easy access and egress to any building where a large mass of people is to be collected, as an example. In the Roman amphitheatres the art of the architect, in this respect, has attained its utmost triumph. Look at those magnificent structures as they now stand, in spite of the teeth of time,—at Capua, at Pozzuoli, at Pompeii, and in other well-known parts of Italy. Even in their decay you hardly perceive anything that we should call *doors*. When filled with people they must have presented a vast sweeping curtain of human figures, without a break, or any apparent means of withdrawing. And yet, owing to the admirable disposal of the apertures for egress and ingress between the *cunei*, but a few seconds would be enough to allow the whole multitude to vanish like a dream, and to leave empty the stone steps that served alternately for seats and for foot-paths. If we contrast this with the unsafe and inconvenient doors, to which we have before now called attention in the case of some otherwise admirable modern churches, we shall find good reason to doubt how far the architects of the latter have realised the master truths of the growth of the population for whom they build. We may say that this problem has been carefully studied by the builders of the Albert Hall, and that readiness of access and of egress are among the excellencies of a building in many respects remarkable.

In speaking of this master difficulty of the day,—the great increase of population, as one of the main points with which the architect who would build for the future has to deal,—we are rather looking at the effect of condition on science, than at that of science on condition. It is, however, the latter relation to which we now will chiefly call attention. If "it is certain that either wise bearing, or ignorant carriage, is caught as men take diseases, one of another," it is no less certain that the influence of the architecture in, under, and amid which men live, must tell on the formation of their character. Restriction and imperfection of plan have a direct tendency to make people, when unduly crowded together, riotous and turbulent. Ample space, airy halls, lofty roofs, give an air of repose and of elevation to the mind, in harmony with the effect of the greater convenience afforded to the body. It is, of course, easy to overrate this influence. But it is a more common error to under-rate it. This is but one instance of the many in which the skill or the genius of the architect is a factor in civilisation. In another respect this skill may be regarded as even a more powerful factor; and that is one in which the good effect is far more questionable. We speak of the luxury of the modern house. Perhaps luxury is hardly the right word for what we mean, but it is hard to find another. We mean the care that is taken to prevent the inmates, in going from room to room, or on any occasion but that of purposely "going out," from ever meeting the external air. Closed corridors, double doors,—above all, gas stoves,—are, in our view, mischievous luxuries, tending to enervate the body and to shorten life. Here the architect may say that he only provides that for which there is a demand. Has he fairly looked the problem in the face? And having so done, has he laid his own conclusions before his client? A drafty house is one thing, a stove is another. The location of the ticket-offices in the Charing-cross Station, swept as they are by every north wind, without the shelter of a screen that might be so readily provided, is a thing as to which we have often perfectly marvelled at the long-suffering of the public. On the other hand, it is to the over-heating and under-ventilating of some of our royal and noble residences that we owe, in our opinion, the loss of some invaluable lives. These, and such as these, are some of the problems which have to be solved by the great architect who would build not for to-day only, but for the future.

ART IN ITS PRESENT RELATION TO TRADE AND MECHANICS.

ALTHOUGH there is a wide-spread belief in the existence of influences which are inimical to the healthy growth of artistic ideas among the communities of our own century, it is seldom that any specific cause is pointed out as having a distinctly degrading tendency. The change in the habits of the population throughout a great part of Europe as regards locomotion is perhaps the most prominent alteration that has occurred among the influences of the outside world. The position of the masses in great commercial centres is certainly without any counterpart in the times that preceded the introduction of the steam-engine; but, making every allowance for the altered state of things in England, there is but a small margin of difference in such a country as Italy to account for the falling off in the artistic enthusiasm of the present century as compared with those which stand out as the great art-periods of the Christian era. The difficulty of accounting for the change increases in the case of those communities which once were and now are no longer distinguished for their art-culture, and where, nevertheless, there are few features of modern life that are not the same as those that were characteristic of the times when the cultus was prevalent. Leaving the attempt to solve the puzzle, as regards countries in which the lives of the inhabitants are much the same now as they always have been, there are one or two elements in the every-day life of Englishmen which cannot fail to attract the notice of any one who is an observer of current events, and which go far to account for the want of vitality that is a conspicuous feature of the art of the nineteenth century.

In making use of the term vitality, we may perhaps find ourselves in collision with a number of our readers if, in speaking of its absence, we did not first explain the connexion in which the word is used. By vitality we mean the growth of art independently of art patronage, as a spontaneous effort of expression on the part of the population. To separate art from the art patron, and make guesses as to what it might have been without patronage, is no doubt frequently to land oneself in the conclusion that in many cases it would hardly have come into existence at all. It is impossible to dissociate the ecclesiasticism of the Middle Ages from the rise of Gothic architecture. In this and many similar cases we find art patrons on one side, and art clients on the other as necessarily related to each other. In the same way, it is impossible to separate the names of the Medici from the artistic wonders which their money and their appreciation called into existence. It is absurd to speculate about the labours of Benvenuto Cellini if he had not been supplied with gold or silver on which to display his skill. So far, it would appear that the art patron cannot be dissociated from the artist, and though it is difficult in many cases to say which is the cause, and which the effect, still it seems that they are related to each other in some such relationship. As a mere matter of speculation, there is no reason to suppose that the two may not alternately assume the position occupied by the other. If a demand arises for artistic productions in the person of a Mæcenas or a Cosmo di Medici, then a supply is very likely to follow; but, on the other hand, if an artist of surpassing genius makes his appearance he is just as likely to create a demand. Looked at historically, there can be no doubt as to the general effect which wealth and luxury have in the direction of developing artistic sympathies among highly-civilised communities. Probably the way in which accumulated riches bring about this result is by first of all rendering the existence of a large leisured class a possibility, and then affording them the means of indulging their tastes by surrounding themselves with objects that minister to their artistic inclinations. In this view the patron has had more to do with the spread of art than the artist, inasmuch as he came first into existence; but such questions have long ceased to have any practical bearing on the present situation of art. Like many other elements of modern life, it has become far too complicated to admit of being treated in the speculative manner which is applicable to discussions upon its origin and earlier developments. This being admitted, it seems a somewhat bold proposal to discuss the art of the present day as apart altogether from art patronage. It will be found, however, that unless we do so there will be certain very important conceptions of the subject that must escape notice altogether. If we cannot remove ourselves from the atmosphere of buyer and seller, and think of art not in the concrete point of view of art objects, but of artistic ideas, then we must fail in perceiving the meaning of art as an abstraction and an influence. Although literature is inseparable from language, and religion inseparable from doctrine, the influence of ideas in either is not necessarily bound up in specific forms of expression. In the same way, the notions that we have about art are not, by any means, necessarily identical with anything that we have seen among the objects which it is the function of art to represent. It is in this spirit that we make use of the word vitality as the growth of art, independently of art patronage, and as a spontaneous effort of expression on the part of the population.

So soon as we look at the subject in this light we begin to appreciate what in literature would be called the "audience." The analogy forms a useful illustration of our meaning. There are races of men who almost universally indulge in the artistic expression of language, and yet among whom no art patronage has any

existence. The art of language in which they are continually exercising themselves only demands an audience. It is to this audience that we must look for the standards of contemporary excellence which influence the character of the art itself, and it is also to the audience we must look for the objective element, which is constantly being modified by the peculiarities of artistic individuality. Any one who has seen a party of Celts meet together for purposes of convivality must have been the witness of a scene in which what we are attempting to describe is acted in little. All the members of the group, as persons acquainted with the Highlands can vouch for, will be masters of a considerable amount of imaginative expression, and each will exert himself to excel. The subject in the first place will be more or less consonant with the audience and the occasion. The manner of treating it will also be influenced by the same considerations, while, on the other hand, if any object is to be gained by the employment of argument or sentiment, it will be exercised in a way which the speaker thinks best calculated to affect the minds of his hearers. Of the reality and vitality of artistic expression among such a group of persons there can be no manner of doubt, and a very similar exhibition occurs among the earlier stages of literature, in which written words take the place of speech. The position of a popular ballad, both in regard to the influences which gave it its particular form, and also in reference to its effect upon an audience, may in almost all respects be looked at as a companion picture to the eloquence of a Celt in a Highland inn. In both cases an audience is a necessary condition, but an art patron is not called for in either. We have introduced these illustrations, in order to suggest, by means of analogy, what is both difficult to trace, and still more difficult to explain among the many other vehicles of expression which exist in civilised communities, and more especially our own. Brushes and paint, and marble and chisels, are not so available as the pen, and still less so than the tongue; but just as they all have much in common when they are used to give expression to the sentiments and emotions, and are never more successfully employed than when they strike the chords that vibrate most widely, so it is quite certain that they have all a certain hold upon the sympathies and affections of mankind, quite independently of the relationship of buyer and seller. It is, therefore, a subject of the deepest interest to inquire into the causes which affect the spontaneousness and vitality of these sentiments. As we remarked at first, while there is a wide-spread belief in the existence of influences in our own day unfavourable to their growth, it is seldom that any specific cause is pointed out as having a distinctly degrading tendency. It is to one in particular that we wish to draw attention, which appears to be inherent in the present condition of things; at any rate, until the general taste has become sufficiently elevated to render its continuance impossible.

Among the jargon of words which have recently become the stock-in-trade of art criticism, and to which it has served itself heir from among the writings of men whose ability was at least a set-off against their affectations, there are few that have escaped from being used as mere verbal vacuities conveying a suggestion of meaning that seems to vanish as we approach it. Several expressions might have been found of considerable service in writing on the subject of art, if it were not for these unfortunate associations. One of these is the word "*precious*." Of late it has been so handled and fondled that little of its original stamina is left. Such as it is, however, it occurs to us as the most available to express a certain attribute of art which has suffered sadly during the present century from the innovations of modern life, and more especially from the introduction of machinery. The word "precious," as we now use it, is of greater significance than that which ordinarily attaches to it. It is in the sense in which it might be used when speaking of a talisman or an amulet, in which the preciousness lies in the deep human interest attaching to the object, and not in its actual commercial value. This element of preciousness in art, or, in other words, the reasonable grounds upon which an object of art retains a hold upon the sentiments and affections, disappears altogether when it is dissociated from human interest in its origin. An unfortunate or degrading association of ideas is equally fatal to its development or endurance. Preciousness in art, in other words, depends upon the close relationship which ought to exist between the work and the workman, in which it should be possible, and often easy, to trace the directing influence of mental or moral qualities that are universally admirable. It is to the elimination of this element by mechanical reproduction we wish especially to refer.

The community in England, as regards art, may be divided into four classes: the first and smallest are those who appreciate this element of preciousness, and are able by reason of their wealth to acquire it; the second, are those who acquire it, but do not appreciate it; the third are those who appreciate it, but cannot acquire it; and the last and largest class is that which is appealed to by a herd of manufacturing imitators, who deal in the mechanical shadows of artistic realities, and degrade the popular taste upon commercial principles.

It is not easy at first to realise either the extent or the mischievousness of this artistic degradation. Its roots lie deep in the materialistic spirit and tendency of the present age, and this is to be discovered at work in every department of industry and of trade. It is in direct opposition to the ethical considerations that ought to prevail in all transactions between man and man. It is seen in the finished products of all our national industries, and even the raw materials of commerce are adulterated by its presence. It is the enemy of honesty, and has so dragged it through the mire that the material standards of workmanship have suffered in consequence. Quantity is the goal of its ambition, and quality is worn as its mask. Every necessity of human life is an arena for its operations, and, not content with mixing itself up with the actual wants of the population, it asserts itself in the region of the sentiments. It is here that we find it acting as a degrading influence upon art. No sooner does an artist succeed in striking a chord of human sympathy, the true value of which is to be discovered in the original alone, than the spirit of money-making steps in to trade upon the emotions that have been evoked by his success. An ingenious mechanic combines his skill with the discoveries of a practical chemist to produce a "process," and the artistic instincts of the community forthwith become the object of their combined attack. A walk through any leading thoroughfare of the metropolis affords an illustration of the gigantic scale upon which these operations are carried on. Lithography competes with bad engraving, until oleography drives them both from the field. The constant presence of a vast supply creates a demand, and the fountain-head of art, instead of being discovered in the brain of the artist, is found to have its source in a counting-house in the City. In the presence of this universal contamination we find that the population have gone backwards in the matter of artistic vitality. We sigh for the simplicity of a labourer's cottage in the country, and long to hear the sound of "the varnished clock that ticked behind the door." But, alas! the clock and the row of grotesque figures that ornamented the mantel-shelf, and that were purchased from the neighbouring town and the hawker's barrow, have been carried off as a contribution to the art-treasures of my lady's drawing-room, while the traveller for a City firm, whose trade is in artistic iniquities, has persuaded the landlord to substitute a gilded production of Birmingham and a hideous oleograph of a picture from last year's exhibition of the Academy in their place.

Any one who has taken note of the attractions exposed in the shop-windows of the vendors of specimens of fashionable art-processes, must have been struck by the degradation of art in a direction still more fatal than that of mechanical reproduction. The popular taste having been lowered to the level that is necessary to find a market for reproductions in which the element of preciousness, about which we are speaking, does not exist at all, it is in a fit state to buy atrocious work from the hands of the artist himself. Oil-paintings framed complete are sold for a couple of guineas, and, judging by the numbers exposed for sale, find ready buyers. All this within a stone's throw of Trafalgar-square, where there is one of the finest collections of pictures in Europe, and where a well-spent half-hour would so indoctrinate the eyes of an honest beholder, that the presence of one of these landscapes with frames complete at two guineas would appear to be abominable.

We have referred to the money-making spirit of the age as the influence most directly and actively at work in destroying the spontaneity of art among the community at large. In the face of the vast trade in reproductions to which we have drawn attention, the manner in which artistic vitality is crushed becomes sufficiently obvious. That some sort of artistic instinct exists is manifest from the fact of these things finding such a ready sale; but what are the chances of a humble artist, sincere in all he does, when he attempts to appeal to these instincts in the neighbourhood of such a Juggernaut? He has but two courses open to him,—either to stretch his wings for a flight through the regions of Crœsus, where he will find wealth and to spare if he succeeds; or to join the "Trade" and contribute his quota towards the degradation of his calling. It is no doubt true that thousands fall between the two alternatives, and neither gain a fortune on the one hand nor a competence on the other. But how different would be the lives of these men if they found in the public an audience that insisted upon being addressed in the language of truth and honesty. Knowing that work sincerely undertaken would always meet with appreciation, if with but a small reward, their labour would be elevated in the consciousness of this prevailing sense of right. On their side, all they did would be a contribution to the higher standards and to the improvement of the national taste. As it is, their audience is carried away from them by the machinations of men who are ready to enrich themselves by first degrading and then by trading on artistic instincts that, if properly educated, would turn away from their wares with disgust. So matters stand at present, and the largest classes of the community, as regards art, are in the hands of men who degrade the popular taste by a wholesale dealing in the mechanical shadows of artistic realities.

That the influence of such a system is not confined to the persons most directly affected by it is not to be wondered at. The same spirit is at work in the case of those who are in a position from their wealth to acquire, but are unable to appreciate, the element of preciousness. When they spend thousands of pounds upon a single picture they are guided in their choice, for the most part, by three considerations. First, the value of the investment calculated upon the experience gained from similar transactions that have proved to be profitable. In estimating the worth of a work of art buyers of this class take the same view of the purchase that they are accustomed to in the case of an ordinary commercial transaction. This includes the prospect of the harvest, the price of iron, the state of the Funds, and everything that has a particular bearing on the future of the picture trade. The next consideration is how the continuance of the artist's life is likely to affect the value of his work. Will he over-paint himself? Will he be an R.A., and paint badly in consequence? Will he fall off, or by reason of painting little and well, will he raise the prices of his earlier works? The last consideration is one that is mixed up with the doctrine of probabilities and the profession of the actuary. When will he die? And how will the calamity, by putting an end to the supply, raise the value of the canvas that bears his name? Although a Mæcenas may have ordinary prudence, and although his art patronage will be all the more valuable to the cause of art if he exercises a wise discretion in what he buys, still in the purchase of pictures he ought not to allow his mind to run in channels that are identical with the successful barter of sugar or of tenpenny nails.

That men who look at art more in the light of its money value than its capacity for giving pleasure to themselves do not fall constant victims to "the trade" is only because the trade in its higher altitudes is protected to some extent against itself." The commercial value of "the line" is undoubted, but it is fixed by the artistic criticism of men who have no money interest in their decisions. So far art is protected, but making every allowance for this saving clause, there can be no doubt of the degrading influence of the commercial spirit so universally prevalent. With regard to the section of the community who appreciate but cannot buy, it is a fortunate circumstance that they are recruited and strengthened by the great body of artists themselves. Men who paint well can have no possible interest in maintaining the reputation of those who paint badly, and they have every inducement, on the other hand, to raise the popular standards in the direction of the good qualities of which they know themselves to be the exponents.

In bringing these remarks to a conclusion, we cannot do so without a consciousness that the evils complained of have become so great that they are bringing about a reaction in every way favourable to a renewal of vitality among the artistic instincts of the people. We are among those who believe that there is nothing so bad either in politics or in morality but it will bring about its own cure if it grows indefinitely worse. A point will ultimately be reached at which human nature will rebel, and although the pendulum long in suspense may swing back in the direction of mischievous extremes, the elements of adjustment are still to be discovered in the common sense that "makes for righteousness." The most highly cultivated classes are naturally the first who are susceptible to the influence of æsthetic shocks, and the first to protest against every species of artistic iniquity. Unfortunately, they are also the class of all others who are most given to extremes. The affectations of language in the department of art criticism have not only rendered many useful words no longer available for the ordinary purposes of expression, but have had the effect of driving practical artists from the perusal of everything that is written on the subject. It is a common complaint among men who wield their brush with most effect that they and the critics have nothing in common. In other quarters, however, much practical work has been accomplished, and so effectually, that in some cases art has taken a distinct stand against the mechanical encroachments of "the trade." The department of pottery is the one to which we more particularly refer, and it is, perhaps, because it is the most indigenous to our own country that reform has in this case acquired a practical and apparently permanent footing. The labours of the Messrs. Doulton and others in this direction have already done much to form the public taste. Here "the trade" to a great extent has given way to the artist. Any one who remembers the mechanical reproductions of the typical "china-shop" of ten years ago cannot fail to be struck by the change. Both in London and in places abroad, notably in Florence, the artist potter is of the "soil." The gutters of Lambeth have contributed their quota, and an honourable fame already attaches to the monograms of City arabs. A piece of burnt clay, however humble, that bears the stamp of a human brain and the cunning of a human hand cannot be taken into the same room, though it be but a cottage parlour, without entering a silent but eloquent protest against the mechanical shadows of "the trade." It may be long before the lump is leavened, but we cannot but augur well for the future of art if all who wish it well would labour so sincerely and successfully as many have already done.

THE EARLY SCHOOLS OF ARCHITECTURE IN FRANCE.

ALLUSION has more than once been made in these pages to the Commission of Historic Monuments of France. Fifty years have elapsed since the first formation of this excellent body, during which time its members cannot be said to have remained inactive. Every corner of old France has been explored by diligent and earnest archæologists and architects, and the Commission may now be said to be in possession of a really important mass of information regarding all the remains of architectural antiquity,—Classic, Mediæval, and Renaissance,—that lie scattered throughout the wide extent of the country. Some years since the Commission produced a careful and valuable map of France, of no small dimensions, on which was duly marked every characteristic architectural feature, whether ruined or not, existing in any part of the country, and which lay within the jurisdiction of the Commission. This map, it can be understood, was the result of much study.

Some three years since, in speaking of the work of the French Historic Monuments Commission, we had occasion to refer to this map, so interesting and instructive alike to the archæologist and the architect. We venture now to lay before those who may be desirous to enter on a further research into the question, a slight sketch of the classification of the so-called Historic Monuments of France, which, while rendering reference to the map more easy, will serve to afford an outline of the development of architecture in France.*

* The map, for those unable to consult it at the public libraries, is purchasable, if we mistake not, at the Under-Secretariate of Fine Arts, Rue de Valois, Paris.

France, for the architectural student and the archæologist, is divided into a large number of schools: each distinctive in its style, its history, and its character. The Historic Monuments Commission, in being formed, had, therefore, a task before them to classify these schools,—no small or easy piece of work. Fortunately, among its members the Commission possessed more than one earnest archæologist. Of these, few, perhaps, were more energetic than the late Viollet-le-Duc, whose practical knowledge of the greater number of the architectural treasures of France was exceptional. The exhibition at present open in Paris of the eminent architect's works would alone afford a signal proof of this fact, without his familiar works on the history of the architecture of his country. We trust that this exhibition, to which reference has already been made in these columns, will add a further interest to the following extract from the report of Viollet-le-Duc to the Commission, in which are classified in a masterly manner the various schools to which belong the historic monuments of France and the origin and development of those schools to which they severally belong.

The research which within the last half-century has been bestowed on the monuments which are scattered over France permits of their being now classed under two heads; into, first, those schools which erected these monuments, and under the direction of which they, more or less, extended their influence as types; and, secondly, those which possess their special importance or relative value from an artistic point of view. In the first place, in a classification of their nature, several conditions have to be taken into consideration; one among these is the state of the territory now understood as France. And first, let it be laid down which were the points of the France of to-day that Roman influence had most powerfully affected, and where, consequently, it has left impressions which are easily traceable for many centuries. That portion of Gaul which forms the France of to-day was divided, under the Roman Empire, into five provinces: Gallia Narbonensis, Aquitaine, Lugdunensis, Belgium, and the province of the Sequani. The Narbonnaise comprised four parts; Aquitaine, two; the Lyonnaise, four; Belgium, two; the extensive province of the Sequani being undivided. For many centuries, and in spite of the Roman domination, these provinces preserved, even during the Middle Ages, a sort of autonomy which resisted the fluctuations of political change, of feudal anarchy, and the attempts at the general union into one kingdom. The art, at least in so far as regards the architecture of these provinces, even during the Roman rule, does not present an identically similar style. The Gallo-Roman architecture of the Narbonnaise (*Gallia Narbonensis*) and that of the Lyonnaise (*Lugdunensis*) present sensible differences, which clearly point to the influence of a pre-existing local taste. As to the Gallo-Roman edifices, the vestiges of which are found in other provinces of Gaul, they are unfortunately too rare and too ruined for anything certain to be affirmed concerning their style or the character they possessed. But it is probable that the populations of these Roman provinces never ceased to be affected by a local and special influence, since we see this difference of character apparent from the first revival of the arts under the Carlovingians.

With the Carlovingians, on the left bank of the Rhine, as also along the Rhône, architecture introduces a Byzantine element into its production, while elsewhere throughout Gaul it only continues to reproduce the last Gallo-Roman types of the decadence, mingled with local elements which lead one to suppose that these provinces, even under the Empire, preserved a certain originality in the expression of their art. But examples are rare; the few remains of this epoch are incorporated into more recent constructions, and it is, therefore, almost impossible to define any separate schools except those of the banks of the Rhine and the banks of the Rhône, which are also in more than one point intimately connected.

We must come to the eleventh century before we emerge from the chaos of uncertainty, and find ourselves able to distinguish the origin of certain schools of art in France.

The first which merits this name is, without doubt, that of Cluny. The Abbey of Cluny, founded about 909, became in less than a century an active centre of literary and artistic study, and the influence of this school, in architecture and sculpture, can be traced up to the middle of the twelfth century, the epoch of the Crusades, when the relations between the West and the East developed in the greater part of the French provinces an artistic movement, which did not, however, produce everywhere the same results, a fact which proves that each of these provinces possessed living local traditions, dating even from a distant epoch.

From the end of the eleventh till the second half of the twelfth century the school of Cluny comprises the whole of Burgundy, and extends on the north as far as Auxerre, Bar-sur-Seine, Châtillon-sur-Seine, Langres, and Epinal; travels along the Doubs, reaches the northern shores of Lake Leman, environs a portion of Savoy, to descend to Lyons, and follow the course of the Loire to beyond Nevers. This school is the oldest, the most extended, and is that which exercised the most powerful influence.

With the school of Cluny must be placed that of Provence, which follows the Rhône from Lyons to the sea, extends eastwards to Grenoble, Gap, Digné, Fréjus, and westwards from Lyons along the Rhône to Nîmes and Agde.

A purely local circumstance had constituted a school at Perigueux from the commencement of the eleventh century. Through the commercial relations of this province with the Venetians (Lombards), who had established their factories at Limoges and on the banks of the Isle, the abbots of St. Front erected a church, contemporaneously with St. Mark's of Venice, and of the same style of architecture. This church of St. Front served as a type for a number of religious edifices throughout the province, and exercised a marked influence on the architectural productions of Poitou, Saintonge, and southern Auvergne.

Nor did Languedoc remain behind-hand. From the middle of the eleventh century it laid the first foundations of a beautiful school of architecture and sculpture, which, following the course of the Gers to beyond Moissac, descends to Toulouse, takes in Alby, Mende, joins the sea-coast at Beziers, and even extends beyond the Pyrenees into Aragon.

At the same time, the Auvergnate school was being developed. It follows the course of the Allier, comprises the Upper Loire, descends the stream to Nevers, then towards the north-east skirts the mountainous track on the two banks of the Dordogne, is assimilated at Souillac and Cahors with the Perigordine school, pushes on to Toulouse, and ascends the Aveyron and the Lot.

Towards the end of the eleventh century a singularly productive school is formed in Poitou, and it is one of those productions which present the most analogy with the edifices which the Crusaders found in Central Syria, which date from the fifth to the seventh century,—edifices of great artistic interest. This charming Poitevin school, from Sable d'Olonne joins the Loire at Fontevrault, ascends the Cher, skirts the Auvergnate and Perigordine schools, leaving on the banks of the Charente a little school to develop itself (the school of Saintonge), which is, as it were, a younger sister attached to it.

The school of the Ile de France, which we see also called into existence towards the second half of the eleventh century, is one of the most remarkable for its originality, and during the twelfth century it is peculiarly developed; it touches Eu, descends to near Rouen, ascends the Seine, shows itself at Chartres, at Orleans, at Bourges, directs itself towards Sens, and then northwards to Soissons, descending the Aisne and the Oise, and skirting the Picard school.

Parallel with the school of the Ile de France, and even a little before it, the Champenois school is developed, rivalling in splendour its neighbour. We trace its existence at Metz, at Mouzon, at Rethel. It joins the Ile de France at Soissons, descending almost in a straight line to Sens; then, leaving an enclosed circle of the Ile de France school at Troyes, it asserts itself at Bar-sur-Aube, at Chaumont, is merged at Langres with the Burgundian school, which it skirts to Moyen-Moutier, as also the Rhenish school.

It is also in the middle of the eleventh century that we see developed the Norman school; this school comprises the whole of Normandy, Cotentin, and merges into the Mayenne school, which skirts the Loire to the coast.

We have now to mention the Picard school, of which unfortunately little or nothing has been handed down to us,—a fact due in part to the friability of the materials employed, in

part to the numerous wars which so frequently devastated this province during the eleventh and twelfth centuries. But this school is thoroughly distinct from its neighbours, and is, with the Poitevin school, one of those which seem to show the influence of the monuments of Central Syria.

Until about 1160 all these schools are perfectly distinct, and preserve their independence. They spring from four elements, three of which evidently possess a common origin; in the first place, the local Gallo-Roman traditions, spread over the Narbonnaise and the Lyonnaise; secondly, the Carlovingian Renaissance, which itself was of Romano-Byzantine origin; thirdly, the Clunisian institute, which sought its elements (especially in its sculpture) in the East; and, fourthly, the movement of the Crusade, which placed the Westerns in direct and continued communication with the remarkable art of Central Syria, and reciprocally. The Cistercians in due course of time built in Syria edifices resembling exactly those which they had left in the north-east of France. If the influence of the Græco-Roman monuments of central Syria be evident in the French schools, termed Romanesque and Romano-Byzantine, it is equally noticeable in the military architecture, from the twelfth century. It cannot be questioned that the fortifications of the towns of Syria, as also those of Byzantium itself, afforded the Crusaders a valuable lesson. Every student knows to what a point the Byzantine Greeks had carried the art of attacking and defending a place; they were the teachers of the Franks, who soon built in Syria and in Palestine formidable palaces to insure their rule, and these methods were eventually carried back to the West.

At the beginning of the twelfth century there existed no schools of art but in the monasteries, and it would appear that the old lay trade corporations, which had never ceased to exist since the Gallo-Roman epoch, cannot be said to have been entirely independent of the abbeys, which, quite as much with a view to profit as to protect them, had gathered round them the remains of these corporations.

Towards the middle of the twelfth century there is clearly manifested along with the powerful abbeys of Cluny and of Vézelay, in the Ile de France, Champagne, Picardy, Normandy, and even in Burgundy, in the schools of architecture and sculpture of those provinces, a completely new movement, the importance of which is shown us by the monuments which still remain to us. Not only are the great edifices erected confided to lay artists, but the architecture undergoes a complete transformation, takes for basis principles absolutely new, and in no way connected with previous or existing traditions.

The Romanesque or Romano-Byzantine in the provinces above mentioned is suddenly abandoned to give place to another art, which, in its outer form, resembles in nothing that which has preceded it, and the principle of the construction of which is supported by purely new data. In the same manner, in sculpture, Byzantine hieratism is put aside; the artists have recourse to nature, as much as in the reproduction of the figure as in the composition of the ornamentation. This art, called without reason "Gothic," is French, since we see it developed, in the first place, in the provinces above referred to, whence it was to spread over almost the whole of Europe. But although the principles from which this French art emanated are observable in the five provinces above mentioned, its expressions are not all similar.

French architecture and sculpture may be distinguished, from 1160 to 1300, by the schools of the Ile de France, of Champagne, of Picardy, Normandy, and Burgundy. If, on a map of France, a line be drawn from Lyons to the Bay of Mont Saint-Michel, all that portion situated to the north-east of this line comprises the territory in which these five schools worked with such singular activity for more than a century in the improvement and perfection of the art they had inaugurated, in urging the principles they had admitted, to their furthest limit, and in building a prodigious number of religious, civil, and military edifices.

Such was the success of these schools that from the middle of the thirteenth century, on the other parts of French territory, as also in England, Germany, Denmark, Spain, and even Bohemia, Hungary, and Poland, each city was desirous of rebuilding its edifices in the new style; and derivative schools were quickly formed in England and in Germany. The masters of these schools were called everywhere; but they did not always find workmen capable of carrying out their conceptions; and hence in France, notably in the provinces situated to the south-west of the line which we have above traced, with some few rare exceptions, the edifices of this epoch present numerous imperfections, and show even a complete ignorance of the principles which ought to have regulated their construction.

With the close of the thirteenth century, however, such was the influence of the French schools of the north-east, that no other system of building was thought of. The last productions of Romanesque architecture had ceased to show themselves by 1250, even in the provinces of the South, like Provence and Languedoc, which accepted only tardily the new architecture. Languedoc had been ruined in the crusades against the Albigenses; the only monuments of the new style which are to be met with date from the fourteenth and fifteenth centuries, and can be assigned to Northern masters, like the cathedral of Narbonne and the choir of the old cathedral of the city of Carcassonne.

By the fourteenth century these schools tend to merge into each other; those, however, of the Ile de France, of Normandy, and of Champagne, preserve their originality, while those of Burgundy and of Picardy lose theirs in their desire to assimilate themselves either with the school of the Ile de France or that of Champagne. After this absolute extinction of the schools of the eleventh and twelfth centuries, and the sole survival, since the inauguration of a new art, of the schools of the Ile de France of Champagne and Normandy, it is difficult to say how and why in the sixteenth century we find again a division of French architecture into the schools of the Ile de France, of Champagne, Normandy, Burgundy, Languedoc, and the Lower Loire from Orleans. But the fact remains, it can only be stated, without it being possible to understand the causes which led to the formation of these six schools, distinct from the year 1460.

The movement of the Renaissance does not show itself, however, at the same date in these provinces. If it is early on the banks of the Loire and in Normandy, it is behind-hand in Burgundy, in Languedoc, and even in Champagne and the Ile de France. On the other hand, the Ile de France soon takes the lead in the movement, and the Renaissance of this province, towards 1530, is an advance on its neighbours.

In this classification of the historic monuments of France, two elements must be, as has already been noted, taken into account; firstly, the schools to which the edifices belong; secondly, the importance or value of these edifices from an artistic point of view as types, and having served as points of departure; in addition, such a classification must necessarily divide the edifices into religious, civil, and military.

This rapid statement will suffice to show how important it is, concludes M. Viollet-le-Duc, that our historic monuments be conserved, and restored where necessary, with a perfect knowledge of the conditions under which they were erected and of the rank they occupy in the history of French architecture.

CRITICISM AND PORTRAIT ART IN PARIS.

IT is certainly calculated to unnerve not a little the strongest-minded critic, still more the reader, to learn that the *Salon* affords to literally several hundred various French journals and journalists an eagerly-seized opportunity for the display of their critical abilities in art matters. That no previous training or practice is necessary for the average young writer for such a task,—it is a favourite mode of entry in France into the field of literature,—is generally understood. Only a few days since, in our hearing, a now distinguished art-critic and Academician remarked how invariably this was the custom, confessing, with charming simplicity, how he himself many years ago, when he was very young, had "done his *Salons*" at a time when he positively knew nothing, when his inexperience rendered him utterly incapable of justly criticising or appreciating a work of art. For in this latter quality of appreciation and leniency the critic must be as equally capable as in that of being severe and unmerciful. We all understand Iago's system of criticism, but notwithstanding the well-known Italian anecdote of the painter who begged the public to mark with chalk the merits of a picture he had exhibited in the *piazza*, we find it more easy to "criticise" in the generally accepted sense of the term, even if our judgments do not all quite agree. Although among the several hundred critics to whom reference has been made, there are to be met with amusing differences of opinion, all, in common with the whole of the artistic world, are agreed in condemnation of the magnitude of the *Salon* this year with its 4,000 oil pictures. The Palais de l'Industrie is, indeed, a grimly auspicious show-place for so vast an exhibition, if the word "market," suggested by more than one writer, is not a better term to apply to the *Salon* of 1880.

Forty years ago, when Daguerre and Fox Talbot first startled the world with the wonderful results of their studies, the professional portrait-painters were painfully alarmed, believing their business was about to be destroyed, and it seemed generally to be conceded that no portrait-painters but those of the very highest class would be able to stand against the formidable competition of the sun. That was the jargon of the day, a day when it could scarcely be said that portrait-painters in any part of Europe were very strong, although there were eminent men living whose works have an historical value from the accuracy of the resemblances they have left us of men and women who helped to build up the society of to-day; but so far from photography having destroyed portrait-painting as a profession, at this moment in the great cities it is more than ever alive and vigorous; and, again, so far from the inferior portrait-painter being driven out of the field by the photograph, there appears to be at present more than ever a class of mediocre portrait-painters, who seem to have no other object than to please a very mediocre class of sitters, and in this year's *Salon* the highest praise that can be given to any portraits there exhibited is that the best pictures bear some resemblance to some other tolerably good portrait by a popular favourite, imitation taking the place of that emulation of the excellent works with which the great masters of portrait-painting have filled so nobly and so instructively our galleries.

French portrait-painters have, however, some excuse. For a century, at least, they have had a number of clients whose greatest aims in life have been frivolous and worldly in the extreme. Under such circumstances it is natural that they should not have produced among their painters a Reynolds, a Gainsborough, a Hoppner, a Romney, or a Harlowe, and without such examples to look back to some excuse must be allowed them. We have but to look ourselves at a picture in the Vernon collection by Dubufe, whose popularity we all remember some years since, or, in our own portrait gallery, at the portraits by Winterhalter, the idol once not alone of Paris but of the whole of Europe, to say nothing of many other painters of an even more pernicious character, to cease to wonder that one rarely finds a portrait in a French exhibition of a lady or of a gentleman that impresses one with the admiration that is always due to the truthful delineation of cultivated nature.

SANITARY REFORM AT THE SOCIETY OF ARTS.

SEVERAL important subjects relating to the protection of the public health were briefly announced in our last number as to be brought forward for discussion at the Annual Conference of the Society of Arts on the 10th and 11th of June. Among these we wish to call attention to the suggestion that the conservation of rivers, including measures for the prevention of floods and for the storage of water, should be entrusted to County Boards, which should also be empowered to put in force the provisions of the Rivers Pollution Prevention Act of 1876, upon the complaint of any local sanitary authority, or of any aggrieved person, and to charge the cost of procedure on the county rate. Further, that such Boards should appoint County Health Superintendents in each county. The appropriateness of the County Board for this duty is a subject deserving of full discussion.

A further suggestion is one that may have been almost taken, in so many words, from former numbers of the *Builder*, having been sketched in our pages in 1872, and before. It is that England and Wales should be mapped out into a few large areas, each of which should be under the administration of a staff of inspectors,

the whole under the superintendence of a permanent head of department. Further, that an Inquiry Department should be instituted, for the assistance of local authorities wanting information; and that the collection of statistical data, the keeping an official record of sanitary experience at home and abroad, and the publication of periodical reports on the subject, should be entrusted to this office. These and similar suggestions are, in fact, but integral portions of the same scheme, originally suggested in these columns, and repeatedly adopted as desirable recommendations at the various conferences in John-street on water supply and on sanitary matters. We take it that there are few men who have given any long attention to sanitary matters who are not more or less fully at one with ourselves on this point. The only, or at all events the best, mode of protecting the public health in England must be a system of medical and of engineering service, based on a sanitary and hydrographic survey of the country. The delimitation of the great outfall districts must form the skeleton of the whole system. Each such main district, to the number of eight or ten in England and Wales, would be to a certain extent independently organised. At the same time the communication of the head officer of health, and of the engineer in chief, of each such main district, with the Local Government Board, would be such as to ensure the advantages of the suggested Inquiry Office. The great waste now involved by allowing independent experimental action on the part of the several urban and rural sanitary authorities can only be prevented by some such systematisation of the work. It is only by instituting a system of reports as to medical and sanitary dangers which in due time will come under the eyes of the president of the Local Government Board, that any certainty can be acquired that the several local authorities will pay any attention to the subjects of such reports. There is nothing as to which the delegates from different parts of the country are more in accord than this. Nor are they less unanimous as to the economy to be attained by a corresponding organisation of the engineering part of the question.

Specific amendments of the law, and the desirableness of sanitary inspection and classification of dwellings, are further subjects set down for discussion at the conference. As to this, we are glad to have the opportunity of calling, in good time, the attention of those who intend to take part in the discussion to the incongruity of proposing to attribute to the Metropolitan Board of Works the duty of a sanitary inspection and classification of dwellings, and of "granting certificates of healthworthiness in different categories for terms of years, according to the perfection of sanitary equipment and fitness for habitation of such dwellings," at the same time that the Metropolitan Board are the great opponents of the law as to the pollution of rivers, by their wholesale precipitation of the crude sewage of London into the Thames.

OUR IRONWORKERS.

THAT ancient "instructor of every artificer in brass and iron,"—Tubal Cain,—could have had no conception of the number of his followers; and even those who have some knowledge of the extent of the iron trade, may be startled at the statement that the total number of ironworkers, of persons engaged in smelting iron ores, and of converting the crude iron into what is generally called "finished iron,"—is close upon a quarter of a million for the United Kingdom alone. And of this vast army of industrials, as the Belgian term has it, how little is known, though they form not unfrequently distinct classes, choosing special parts of towns for their location, having distinct tastes to those of the bulk of the inhabitants, and carrying often in appearance some of the tokens of their fatiguing and often unhealthy occupation. In Staffordshire, in South Wales, in parts of Durham, where the ironworker has been long located, and in the two older of which districts, at least, the trade has been followed for generations, there are manifold signs of the presence of the great industry, almost as marked in the persons of its followers, as in the black furnaces that belch forth flame and smoke. The industry is scattered over many parts of the country,—the primary branch being determined in its location by the position of the deposits of ironstone; whilst the manufacturing branches are more determined by the situation of consumptive industries such as shipbuilding or allied trades. And where other things are equal, the industry, in both its branches, gravitates towards the seaboard or to the banks of navigable rivers. In only thirteen of our English counties is iron smelting carried on; and in five of these there are no rolling-mills for the production of finished iron. We have, however, above 186,000 ironworkers in England and Wales, about 60,000 for Scotland; and, it is supposed, some 2,000 in Ireland. And at the date of the last census there were no fewer than 2,093 females engaged in this unfeminine work. The great centres of the trade are,—for the crude iron branch, Cleveland and South Durham, Lanarkshire, Glamorgan, and that northwestern district which embraces Furness and a part of West Cumberland; and for the finishing branches, South Staffordshire, South Wales, the North and West Ridings of Yorkshire, and Durham. In these the bulk both of the blast furnaces and puddling furnaces are centred, and the greatest part of the ironworkers proper reside.

Of the workmen employed in the smelting of iron ores, although distinguished by various names,—"keepers," "chargers," "slaggers," "mine-fillers," and so on,—there is practically a division into two classes,—those who prepare the ironstone, coke, and flux for the furnace, and those who attend to the latter, the wages varying from that of the labourer at 1l. per week to that of the keeper at nearly three times that amount. The conversion of the crude iron produced from the furnaces into rails, plates, bars, or other "finished" forms, is effected, roughly speaking, by the "puddlers," who boil the pig-iron, and the millmen who roll the molten masses of puddled iron into the form it is destined for, and whose wages vary much more than those of blast-furnacemen; for, whilst some of the under-hands earn barely 1l. a week, it was proved in a recent arbitration case in the Durham district that some of the millmen, who are paid by the ton, earn over 1l. 5s. per day. And this irregularity is added to by the fact that at a large number of ironworks there are bonuses added, under various names, for working under given circumstances, or for producing an extraordinary quantity of iron in a given time.

Working under often disadvantageous circumstances, performing labour so hard that one portion of it,—that of puddling,—was declared, in a recent official document of the workmen in the Northern iron trade, to be "allowed by the most competent authorities to be the hardest work that is voluntarily undertaken by man"; and often amid surroundings the reverse of pleasant, it is not to be wondered at that the ironworker has grown up with a character full of rugged outlines. But if the location of the iron trade be observed in its ancestral haunts, in the once green valleys of Wales, in the heart of the "Black Country," or in Scotland, it must be acknowledged that there is a partial justification for the ironworkers' lack of æsthetic perceptions. In these parts the traveller has often opportunity to notice the surroundings of the ironworker. In an atmosphere surcharged with smoke and fume, where on the sunniest day the gloom seems not wholly penetrated, where huge stacks of blast-furnaces rise to belch forth clouds of smoke and fitful tongues of flame, there may be seen the ascending barrows of ore, fuel, or flux, with their attendants, or by the blast flame these may be seen on the furnace-top, whilst below, by the glow that spreads from the white-hot stream, there are others guiding that stream along the sandy furrows. Or, in the rolling-mill, where there is a thunder and reverberation from the immense steam-hammers, which beat great masses of white-hot iron into shape, with the clatter and clang of machinery, the hissing of steam, and the whistling of engines, there may be seen in the fierce heat that beats upon them puddlers half-naked before their furnaces, watching, stirring, and collecting the molten metal; shinglers, in their panoply of leather and iron, guiding the steam-hammers; and rollers engaged at the great mills in shaping bars, rails, angles, or other productions. It is droughty work, and it is no wonder that it often developes what Southey's Doctor called the "bibulous clay" of humanity. Around these scenes there are usually the ugly, stereotyped, and often unhealthy surroundings of ironworks; the fields covered with slag, the great heaps that impinge on the lanes, shutting them in with banks of scoriæ; the long, unlovely streets, blackened with the ashes from the works; the small and dilapidated cottages; and the gloom that overshadows, as with a pall, the whole face of the country. With a labour which is exhaustive, carried on day and night by the different "shifts" of men, and with usually a limited education, it is not surprising that ironworkers find too frequently in the tavern their chief relaxation. Some amongst them have risen; for the Iron Kings,—whose race is dying,—rose in the past chiefly from the ranks of the men. And the influence of those who thus rose was far more beneficial than of the companies who have succeeded them. They personally knew and chose their men, and some of them acted in the spirit of the stonemason, whose soul was put, according to Hugh Miller, into the stones he laid. The Iron Kings ruled with a rod of their own metal,—sternly, but not unkindly; for they endured the hardships their men endured in a very great degree. They dwelt often in the works, literally; and in at least one eminent instance they shared the very food, and adopted the habits of the puddler.

But the labour of the latter is being lessened from year to year by the constant advance of the steel age. On railways it may be said that, almost universally, steel has taken the place of iron; and there are indications that in shipbuilding, and in some of the other chief uses of iron, the same change is impending. And as the labour needed in the production of a given quantity of steel is less than that needed for the production of the same quantity of iron, and the former metal is the more enduring, there is a double reduction in the number of workmen employed, so that the ironworker is in some branches spoken of as one following a decaying industry. It remains to be seen whether this will be the fact; but, in any case, this hard-working, full-blooded body of men have in the past done much for the weal of the commonwealth. And if the work of the puddler should cease, and the men of Glamorgan and Staffordshire, whose ancestors have been puddlers for generations, should seek other and less hard employment, their sinewy frames and strong arms, and their fire-burnt faces may become the strength of industries of the future, as they have been of their present trade since the days of Cort.

FROM THE BANKS OF THE SEINE.

ON Thursday, the 27th ult., an artistic ceremony of some solemnity gathered together in the quiet suburb of Ville d'Avray, under the very walls of the metropolis, a chosen assembly of notables in the world of art, letters, and politics. The bust of Corot, the romantic landscape-painter,—by his friend, M. Geoffray Dechaume,—was unveiled in sight of the embowered villa which the old artist had occupied since the early years of this century, and amidst a crowd of his pupils and friends the memory of the veteran artist, who held so high the honour of French art, was enthusiastically recalled by more than one speaker, while a favourite of the Théâtre Français company recited some graceful couplets composed for the occasion by the poet François Coppée. M. Turquet, the Under-Secretary of State for the Fine Arts, in connexion with his compliment to the deceased artist, assured the audience of the continuance of the Government's protection of the fine arts; but it was from Corot's faithful friend M. François that was to come the warmest panegyric of the old painter,—a panegyric interrupted more than once by tears. As an intimate acquaintance of Corot, François was able to speak with more than usual feeling of "the Rembrandt of the open air," as he termed him; the artist who threw, almost for the first time in French art, such a halo of mystic romance over the simple scenery he loved to paint, and which has made his name familiar to the world at large. Ceremony and inauguration terminated, the day was fitly closed under the hospitable roof of the well-known publisher, M. Lemerre, in his villa home at Ville d'Avray, over which Corot had so often wandered. There all the distinguished guests of the morning were again gathered together, and again the memory of kind old "papa Corot" was revived by friends and grateful pupils. It is by simple yet suggestive ceremonies of this nature that the French so well keep alive the reverence of the rising generation for those who prepared the stony road to progress. But alas! in this case who has been able to lift the cloak

which Corot bequeathed to his faithful followers? With Corot passed away one of the last of that sturdy group of a generation ago, Rousseau, Troyon, Millet, and Diaz, who promised so glorious a future to French landscape art, whose first impulse had been received from our own Constable. The French are incapable of neglecting to pay their debt of gratitude to their deserving great men, and now Corot is one more of the many distinguished Frenchmen of whose appreciation some more solid recollection will be handed down to posterity than mere tradition and current literature will afford. We might in England adopt more universally than we do this charming method of honouring our illustrious dead. The squares of our great towns and cities, particularly the embankments of the metropolis, cry out for so suggestive and instructive a mode of decoration.

But if in the open air our great men are ill-represented, few countries can boast a Westminster Abbey, whose very mention arouses a throb of ambitious emulation in every truly English breast, and excites the interest of every foreign visitor. Now M. Raspail has laid before the French Chamber a petition to urge the Government to return to the original intention of the First Republic, and transform the church of Ste. Geneviève into the Pantheon, on the pediment of which may still be read beneath, the work of David d'Angers, if we mistake not, the expressive words, "Aux grands hommes la patrie reconnaissante."

The summer is rapidly progressing, and already we learn from our Bruxellois neighbours on the banks of the Senne of the promised fêtes in which Belgium commemorates the twenty-fifth anniversary of her independence. The first of these festivities is the inauguration of the great permanent and international exhibition of art and industry. On Tuesday the King inaugurates the show. The Permanent Exhibition is established in the vast Palais du Midi, on the beautiful and only recently-built Boulevard Central. Till this year the exhibitions held at Brussels have been of a purely national character, and had aroused little attention abroad; this year, however, the International Exhibition will attract to the gay little capital of Belgium visitors from every part of the world. Brussels is not alone to monopolise the celebration of the Brabançon Revolution,—throughout Belgium fêtes are to be held; and much do we hope that the opportunity will be taken advantage of by those who till now have not visited the industrious little kingdom, which, though only twenty-five years old, is so prosperous and happy.

While we are speaking of Belgium and the Brussels Exhibition, in which the art of Flanders and the Low Countries is to be characteristically represented, it may not be uninteresting to some of our readers to learn that M. Havard has recently added a third part to his now almost classic work on the "Art of the Dutch Masters." To Miereveit, to Rembrandt's son, to Govert Flinck, to the Palamèdes, to Adrian van der Velde, to Metzu, and other artists, we have now added Beerestraten, Pieter Codde, and Pieter de Hooch. Little, as it may be imagined, or nothing, was known of the birth or death of this last excellent artist, whose power as an interior painter, whose effects of sunlight and of shadow, and, above all, whose truth, have rarely, if ever, been surpassed. M. Havard tells us now that Pieter de Hooch was not, as is said, the pupil of Rembrandt; that he came from Rotterdam, that he was married very young in 1654; but the precise dates of his birth and death are still unknown. To each of the lives he relates, M. Havard adds a list of those works of the painter which have survived, while numerous etchings render the work, in addition to its instructive nature, beautiful.

A question of some slight professional interest has been recently occupying here the attention of a portion of the public,—a question of movability, or rather removability, of "fixtures." The statue of the Virgin which adorns the chapel of the small village of Breuil, in the department of the Marne, is it to be considered a movable piece of property, or a "fixture"? This is the grave question which has successively occupied the legal attention of the tribunal of Epernay, and more recently the Cour de Paris,—a question not without its importance, when we consider that the movable property belongs to what is termed in French the "famille paroissiale,"—in other terms, the vicar of the parish, while the fixtures and the actual chapel belong to the municipality; the settlement of the relative rights of these two owners is therefore important. The controversy arose as far back as 1874, when the vicar of the chapel needing money, and being unable to raise the necessary sum from his flock, bethought him of the Virgin's image, for which more than one connoisseur had already angled; 600 francs were eventually paid by one of these gentlemen for the treasure, and after certain ecclesiastical formalities, the image was handed over to its owner, the money to the vicar. Now the municipality of the village ask if this act was legal. The artistic value of the statue was not brought into the question, although (a detail not without its point) the treasure was said to be worth considerably more than had been given for it; the dispute was purely to determine which of the two powers,—the communal or ecclesiastical,—had really the right to act in the matter. The statue resting on a pedestal, the church authorities urged, it was therefore independent of the building. "Yes," replied the municipal counsel, "but the pedestal was built into the masonry, and the statue itself by a hook in the back was connected with the wall." The judges at Epernay gave a decision in favour of the municipal authorities, and the connoisseur was condemned to restore his purchase. He appealed, but the Paris Court of Appeal has only confirmed the judgment of the Epernay tribunal.

A question of a very different nature, but one, perhaps, more interesting to the public at large and deserving the notice of the profession, has recently been raised in the Paris sanitary world. Not long since reference was made in these pages to the re-organised system of hygienic statistics in the French metropolis. One result of this what to many appeared useless step has already shown itself, and will lead, let us hope, to important measures. Dr. Bertillon has already, by comparison of these statistics, arrived at some facts which are certainly calculated somewhat to alarm timid folks; the parish of the Sorbonne is one of the most populous of Paris, but, without assigning figures, suffice it to say that while the statistical calculation allowed this parish proportionately some nine deaths by small-pox in the course of the first two months of this year, there have been no fewer than fifty-seven cases. This fact was startling. Further examination has shown Dr. Bertillon that these cases were not distributed over the neighbourhood, but were confined to a small space scarcely a quarter of the whole district, and this fact, the most important, all in the neighbourhood of the Hôpital St. Eugenie, an annexe of the old Hôtel Dieu. A further strange fact: while this annexe is shown to have literally propagated the disease in the poverty-stricken, dirty, and crowded neighbourhood which surrounds it, the old Hospital Laënnec, in the Rue de Sèvres, in which are also received small-pox patients, does not in the slightest degree affect the surrounding population. This fact can be attributed to the openness of the neighbourhood, which is well aired. We have here only another proof of the danger of municipal authorities placing and allowing hospitals, and particularly those containing patients suffering from contagious diseases, to exist in crowded centres. Science has shown that as the plague has been stamped out, we may by proper care entirely get rid of that second greatest scourge of humanity,—the small-pox.

Fine Art Exhibition at Leeds.—On Tuesday last the first Exhibition of the Yorkshire Fine Art Society was opened at Leeds by Sir Philip Cunliffe Owen. For years the lovers of fine art in Leeds have had to lament the want of annual exhibitions of fine art in the West Riding for the purpose of encouraging local artists, and in 1878 an effort to provide a suitable building was unsuccessful. At a meeting of the society in 1879, however, the accommodation offered in the newly-erected Athenæum-building, Park-lane, Leeds, was brought under consideration, and from that time great energy has been shown in completing the arrangements for the exhibition of paintings, &c., which has now been opened. About 1,500 works of art in oil and water colours are shown, besides a rich array of statuary, etchings, and engravings, and there are many exhibits by local artists. The building has been designed by and carried out under the superintendence of Mr. William Bakewell, architect, Leeds. Mr. J. H. Thorp and his sub-contractors have executed the work, and Mr. Dews has acted as clerk of the works.

RESTORATION, AND ST. MARK'S, VENICE.*

THE efforts recently made to prevent the destruction of the façade of St. Mark's at Venice have afforded a suitable opportunity for calmly reconsidering the principles which it is desirable should guide our treatment of any old building which may, from whatever cause, have become interesting, not merely to the artist or antiquary, but, in varying degrees, to other branches of society. It has of late years been made evident that there are at least two classes of opinions upon the subject, and that these are generally widely divergent, if not diametrically opposed. It is also evident that the question cannot fairly be relegated to the decision of a capricious "taste," as it is not possible for individuals among those interested to choose, each for himself, what course shall be adopted. The decision of a few, and those not usually or often chosen representatives, is final and unalterable as regards the result, because a work such as that under consideration is, when once completed, for ever incapable of being undone or reversed, and therefore should be regulated by and decided upon principles of undisputed accuracy and logical reasoning, instead of upon the variable opinions of inconstant fashion. The lover of pictures can make his selection between a "Frith" or a "Whistler" to hang on his drawing-room wall, and can despise or ignore the perversity of those who assert that the choice was not a wise one; but the antiquary who admires the grandeur of St. Alban's, or the artist who loves the glowing colours of St. Mark's, will have no satisfaction or redress when the one shall have been sacrificed to a passion for great public works, and the other rebuilt from the designs of a strong-minded and persistent amateur. That such works have hitherto been left to be directed by the energy of committees or the whims of individuals, and the results accepted as satisfactory by the general public, is but another proof of how little inclined the public is to think for itself until fairly roused or interested. It is to be hoped that in this case the interest aroused will have enough vitality to last until the subject has been fairly set at rest by the enunciation and acceptance of principles sufficiently clear to serve for future guidance, and sufficiently logical to form a sound and satisfactory basis. There need be no hesitation in asserting that neither in England nor elsewhere is the matter generally understood, for the simple reason that few persons have ever taken the trouble to examine the conditions upon which it rests. We may leave out of consideration for the moment the opinions of those who affect so "advanced" a phase of thought as to wish that every link which binds us to the past should be broken,—that every building venerable from its age should be destroyed, as a relic of maudlin superstition or feudal tyranny; our interest is rather with those who profess an admiration and respect for the work of past ages, and who wish to see it preserved, either for its own sake or for the sake of its own associations.

The exact scope of our inquiry is to ascertain, if possible, upon what principles we should act in our treatment of buildings other than modern when they are admittedly of sufficient value to deserve consideration. We must first satisfy ourselves in what does the real value of an old building consist? Is it in its beauty apart from its age, in mere age apart from beauty, in its historical associations apart from either age or beauty? Or is it merely as a specimen of some style of architecture, or as a sample of some kind of work, that the subtle charm consists which makes it worthy of our respect? It should be remembered that any work of man has in addition to, and entirely independent of its own intrinsic merit, which is unchangeable, another added extrinsic value or interest as a record of the time when it was produced. This value depending upon the fact that the record is of a time gone by, it follows that the more distant the period becomes, the greater is the value of the record so long as it remains untampered with; and thus it sometimes happens that a work which may not in itself be of the highest quality, has acquired, by the lapse of ages, an interest which is enormous, while it is evident that a record tampered with is falsified, and is not only worthless, but misleading. At the same time, it must not be forgotten that this value of which we are speaking depends

* Paper by Mr. William Scott, read before the Architectural Association on the 28th ult., as elsewhere mentioned.

in the first instance upon the connexion of the work with some person or persons as his or their production, and is quite different from that which attaches to a natural object, whatever its age, while being immeasurably higher in degree; and it is just this value and this connexion which are usually overlooked or ignored in judging of ancient buildings, especially with reference to their treatment by ourselves. There are hundreds who will see a beauty or picturesqueness, a quaintness or charm of colour, the prettiness of a moss-grown ruin or the grandeur of a stately pyramid, for one who feels that over and beyond all this there is a kind of life, so to speak, which has been breathed into these works of a long-passed age by the genius that fashioned them,—a charm subtle and inexplicable, perhaps, but not less true because tender, not less real because invisible to the vulgar gaze.

To ordinary observers, a building, even an old one, is, no doubt, theoretically a very commonplace thing, and not likely to excite any deep sentiments of respect or enthusiasm; but there are few among thoughtful men who have not felt, in the presence of some cathedral "dim and vast," or among the ruins which strew the soil of Italy and Greece, an influence not explained by mere size or magnificence, by the grouping of clustered columns or by the heaping of carved stones. Reason as we may, the truth is that, apart from beauty of form, examples of style, picturesque subjects, stains of time, and so on, there is another and a deeper interest, a more important value,—the one, in fact, to which all others are secondary and subordinate, viz.,—that the stones of which these relics are composed, the materials out of which substantial structures have been erected, bear the work, the chisel-marks, the impress; in short, the hand-writing, of men dead long centuries ago,—that their thoughts and fancies are expressed by the quaint forms of interlacing ornament or the richness of leafy sculpture,—that their aims and aspirations, their triumphs, ambition, and religion were written on the carved panels or flowing lines of moulding in the structures they have left, and that by these men or their humbler fellows one stone was placed upon another, and each tough beam or tiny tessera laid in its appointed place, until, from lowly foundation to topmost height of slender spire, from darkness of gloomy crypt to vaulted splendour of cathedral nave, the whole building became one long story of the hopes and fears of men. And so it comes to pass that to destroy the surface on which they worked, the results of their labour, the signature and seal which they have left, to take those stones one from another, those marble slabs from their own resting-places, no matter with what care, with what perfect correctness of intention, is, consciously or unconsciously, to blot out all of their most important value and interest, to silence their truthful story, and falsify their faithful record. It has long been recognised that an original painting is worth immeasurably more than any copy, however perfect, and it is so simply because the master's hand wrought it and his brain conceived the idea; the copy may be so perfect as to defy detection, and equally lovely with the original; but the fact remains that it is not the original, and its value, though, perhaps, not small, is much less than that of the other. Is there no difference in value between a piece of marble chiselled by an old Greek sculptor, whether his name be known or not, and its ever so clever copy turned out of a studio to-day? Is the Coronation Chair in the old Abbey at Westminster, where one after another, in long succession, the kings of England have been crowned, worth just as much, and no more, than its modern imitation would be? Is it nothing that on a particular spot in the portal of St. Mark's the proud Barbarossa bent his royal neck under the foot of the Pontiff Alexander?

There is something, then, that is worth honouring and preserving in the relics of a time gone by, and in the work of hands now mouldered into dust; and if it can once be recognised that it is this connexion with its makers which gives a value and interest to a work of art, whether statue, picture, or building, there will be no longer a difficulty, no more a dispute, as to the treatment it should receive. Let it once be admitted that, if a work were originally of sufficient merit to deserve continued existence at all, it has gained and not lost by the lapse of the years it has lasted,—that an old building has become interesting from the scenes that have taken place within it, and that its varying vicissitudes and changes of fortune, having left their successive marks upon its walls, it has become an historical record, written, not with mere empty words, but with stern actions and living force,—let it be acknowledged that its value is not dependent merely upon its form or colour, but upon its being the expression of human thought and skill, the work of human hands, then it will be seen that the record, to be worth keeping, must remain untampered with; that its interest is incapable of being transferred to another site or structure; and that its value would be destroyed by allowing our workmen's tools to pass ever so lightly over its surface, or our own hands to re-arrange its scattered stones. If these things had been thought of or remembered a quarter of a century ago, we should not now be mourning over the loss of so many treasures that can never be replaced, so many broken links in the chain of memories that bind us to the past. Those who have had the custody, we will not say the care, of our ancient monuments, have looked upon and treated them as if the mere forms they exhibited, being in themselves curious or beautiful, were the only things of interest, and as if, when one particular form or piece of carved stone was hastening to decay or being destroyed by the wilfulness of ignorance, all that was needed to be done was to set up a copy in its place, as if that copy, from its more or less correct resemblance, was able to possess all the value of its original.

It is indisputable that any building, being exposed continually to the more or less destructive influences of the atmosphere, or of what is technically known as "wear and tear," must sooner or later begin to fail in its weaker parts, and ultimately, in most ordinary cases, collapse altogether. With regard to such extraordinary structures as the Pyramids, we need not trouble ourselves to calculate their chances of enduring; but many of the most beautiful and valued erections that the genius of mankind has produced are composed of materials not too lasting in their character, and destined to yield more or less quickly to injurious influences. Sometimes the more enriched portions of a building are formed of materials more delicate in their nature and power of endurance than the others, and these, failing before the rest, will, for the simple purpose of safety to the structure, sometimes require to have their places filled up by sounder and newer work. With regard to most, if not all buildings, a time will come when settlements will occur here and cracks show there, when a beam will rot, or a post give way, and when, if the whole is not to become a ruin, a buttress must be built here and a prop put there, a tie in one place or a band in another, and all this inevitably, irresistibly, owing to influences which cannot always be prevented.

To put the matter shortly, a building, no matter how well constructed, or how carefully used, will, sooner or later, stand in need of what are termed repairs. The extent of these will depend upon circumstances more or less under control; but for the moment this branch of the question is beyond the scope of our inquiry, and we are rather concerned to determine upon what principles those necessary and inevitable repairs should be carried out. This question was asked, tacitly at least, some quarter of a century ago, when a large number of buildings, chiefly ecclesiastical, were suddenly discovered to be extremely interesting, and, at the same time, extremely dilapidated. The answer was found in the great system which spread so rapidly not only through England, but also over France and Italy, and which is known by the name of "Restoration." About this system much has been said and written by various authorities, and from different points of view. There is the standard of the antiquary, who cares principally for what he calls "accuracy"; then the architect has something to say about "styles" and examples of different "periods"; while the painter seeks only to preserve quaint picturesqueness and variety of rich colour. One class values a building because it is beautiful, another because it is old; on the one hand we are told to "reinstate according to precedent," on the other hand are implored to leave entirely alone. It cannot be denied that the primary and principal idea involved in the term "restoration" is a bringing back of something that has been taken away or ceased to exist, whether it be a tangible form, a state or condition, or simply an appearance; and the restorer has over and over again explained his aim and object as being to "bring back to its pristine splendour" that which has suffered from the ravages of time, to "restore to its former condition" something which had become old or decayed. It is necessary to be explicit upon this point, for it is just here that the whole consideration hinges. It is not a question of skill or incapacity, of erudition or ignorance, or even of correct or incorrect intention; all that can be claimed on these points may be granted at once. The question is whether the principles underlying the practice be in themselves reasonable and logical. It is quite reasonable that those who looked upon a ruined or dilapidated building, and conjured up visions of its former splendour and beauty, should wish to see these restored, if possible, and that very natural desire has given rise to the attempt at its realisation. It is perfectly true that we should be able, with the means at our disposal, to erect structures as grand or elaborate as anything in the work of former times, as large, or as full of extravagant richness, if we felt so disposed; and, if we had sufficient information, and were inclined to make the effort, there is no reason why we should be unable to produce an exact copy of any ancient building, with all its varied light and shade, ornamentation, carving, gilding, fresco, or mosaic, and so produce exactly the effect which it originally had. This is what has undoubtedly been aimed at by many of our restorers, and, so far as they have attained it, it has satisfied them; they have sought to produce an effect or appearance, and, having so far succeeded, have not considered whether the end they had in view or the means they employed were alike legitimate or praiseworthy. There are others again who, having conceived an admiration for certain forms or details belonging to given periods, have sought to reproduce those forms, and, having done so, have remained content. To them the technical phraseology of the "Handbook" or "Dictionary of Architecture" supplied all that they needed for their arguments or conclusions, and to produce a "Lancet arch," a "zigzag," or a "quatrefoil" in the place of one of those vanished features was their highest ideal of restoration. How many a zealous antiquarian parson has snatched an occasional half-hour from other works of charity to advocate in glowing language the replacing of a "thirteenth-century window" in the position occupied by one of later date, because he imagined there was once such a window in that position. We may admire his enthusiasm and respect his innocence if we are not satisfied with its aims. Of him it may be said,—

> "A Norman door in cloister dim
> A Norman doorway was to him,
> And it was nothing more,"—

and to have got his "Norman door" or "thirteenth-century window," or, rather, the forms which were called by those names, satisfied his honourable ambition. It may be asked, "And what more laudable than the attempt to reproduce those vanished features once of so much beauty and importance, and tending so much to the absolute 'correctness' of the ancient work?" What, indeed! But can it be done? Has it ever been accomplished?

It was shown above that the value of an old building does not consist merely in the exhibition of certain forms or arrangements of colour which can be copied and multiplied at will, but in the fact that certain hands had handled, laid, or carved the materials of which it was composed, and that their work is mainly valuable because it is theirs, no matter who they were, and not merely because it is beautiful or because it is old; and it has since been shown that the restorer's aim is to "bring back" that which has passed away, to "restore" what has been destroyed, and it needs but little thought to see how utterly absurd is the supposition that it is possible to bring back the destroyed work of men long dead, the signature or handwriting of former generations. When a sculptured fragment of marble has been crushed to atoms, is it possible to bring back the original work or to reproduce the master's chisel-marks? And when the doorway or the window, the carved shield or varied arch-mould, has crumbled into dust, how is it possible to give us once more the stones which the original builders worked and placed one upon another, and upon which they had set their mark? And yet it was these which bore *all* the value and interest, and it is these which restoration is intended to reproduce. The fact is that restoration is utterly and for ever an impossibility, and any attempt at it must therefore be a mistake. If we are told that no

one has been foolish enough to attempt an impossibility, the answer is that without such an object in view as that which has been shown to be the restorer's aim, the whole theory of restoration would have been equally an absurdity and equally unreasonable. No doubt its advocates never stopped to think where their principles were leading them. It is unfortunate that they did not; but they were none the less mistaken because they meant to do right, nor are the results more satisfactory because produced with the best intentions. The language of restorers themselves is a quite sufficient guide to their thoughts and intentions. How often have we heard it said, in reference to the restoration of an old church or other building,—"We found traces of a thirteenth-century window, and so we have restored it"; or,—"There was formerly a fourteenth-century doorway in such-and-such a wall, and we have restored it." Restored what? "The window and doorway that previously existed." But how? By making in the nineteenth century a window or a doorway of the thirteenth or fourteenth century, and asserting that the original has been brought back! Surely the imbecility of thoughtlessness could go no further! And yet it is to this that learned antiquaries, accomplished literary men, and even intelligent architects, have lent the support of their sanction and sympathy! . . . . It is quite true that the restorers have no intention to deceive, but the inevitable result of their efforts is that, in hundreds of cases, even in the present day, it is difficult for amateurs or unpractised observers to distinguish the genuine work of a former age from its modern imitation. And what will happen after a century or so, when the stains of time and the lichens of age have cast their mantle over the crudeness of the nineteenth-century repairs? Already numerous curious mistakes have arisen in consequence of misplaced admiration of supposed old work. Some years ago the members of a local architectural and antiquarian society, out for their summer excursion, were standing opposite the west front of Iffley Church, and admiring its quaint early design. "What lovely Norman windows!" were the words which passed from mouth to mouth among the group of learned persons and distinguished amateurs. "Ah," said the accomplished archæologist who was conducting the visit, and who had been connected with the restoration of the church, "*we had authority for those windows!*" Perhaps some even of those ardent restorers must have felt, at this information, that their enthusiasm was slightly premature, but such is the force of habit that in all probability the intense absurdity of the situation escaped them, and they only admired (and deservedly) their *cicerone's* intimate acquaintance with the details of ancient architecture.

It is idle for those who still cling to the name and system of restoration to tell us that things are not done nowadays which were commonly done say only ten years ago. The very fact that so great a change has taken place during the last decade, owing to the exertions and pleadings of a few, more thoughtful than their fellows, of itself goes far to prove that there was something seriously wrong in the first instance, and does not by any means prove that a correct and logical system or set of principles has yet been adopted.

It matters not how little is done to a building when that little is enough to destroy all the value and interest therein contained. It would hardly be considered that the taking of human life might at least be condoned, if not actually justified, because the murderer had refrained from shameful mutilation of his victim; and though this is confessedly a somewhat extreme illustration, yet it is true that we have often been asked to approve the utter ruin and death, so to speak, of an old building, because it had not actually been razed to the ground. It has become a fashion to treat old buildings in this way,—to supply copies of supposed old features, with the idea, at least, of making the new work "harmonise" with the old; and a fashion is generally hard to overcome, except by starting a new one. It is a pity, however, if so important a matter be left to be treated upon principles with so unstable a basis, and one so liable to change. If we must cut away a pinnacle, or take down an old piece of walling, because its continued existence, even for a time, would endanger the safety of the rest of the structure, why should it be advisable or just to mask a necessity, and pretend that nothing has been done? What would be said of the surgeon who, having found it necessary to amputate a limb, in order to save life, endeavoured to disguise both the necessity and the result, by attaching to his patient's body an exact copy of the removed member and confidently asserting that the original one had been restored? Yet this sort of thing has been not only done, but defended by the advocates of restoration, and the public accepts their decision. If a rough mason's lad were seen with mallet and chisel, vigorously endeavouring to improve the aspect of the Elgin marbles, perhaps even the ordinary observer might think the treatment somewhat rough; and yet accomplished antiquaries have stood calmly and approvingly by while the priceless works of the Middle Ages were being subjected to a similar treatment. Worst of all, even now the general public would be content to see the Elgin marbles, St. Mark's Church, Westminster Abbey, or any other relic of ancient art, thus ruthlessly tampered with, so long as the work were being done under the direction and sanction of some great name; and it is at the present moment finding funds for the destruction of much of the value of St. Alban's, to please the fancies of a few amateurs with a mania for meddling with Mediævalism.

With regard to the treatment which any ancient structure should receive at our hands, it is of course true that each individual case must be judged on its own merits; but it may be asserted as a fundamental and guiding principle that any work or part of a building which is sound and stable should be left absolutely untouched, and, as far as possible, be protected from the chances of injury. When any portion is in such a ruinous and decayed state as to render its removal absolutely necessary to the safety of the fabric, this necessity should be boldly recognised, and the work carried out without hesitation, without any attempt at concealment, and with the frank confession that a thing once of value has been, no matter with how much regret, necessarily removed. When any signs of weakness, instability, or incipient decay present themselves, every precaution should be taken to prevent their spreading; buttresses should be built, under-pinning resorted to, shoring or props erected, iron ties or bands inserted, and every device known to constructive science made use of, except the mischievous one of taking down and pretending to rebuild, either with old or new materials, a piece of ancient work. If it be objected that buttresses are unsightly, and tie-rods anything but picturesque,—that the perfect beauty of the original design would be marred by iron bands or wooden supports,—let us remember that as in common life a crutch is usually better than a wooden leg, and an arm in a sling than no arm at all, so the evident supports of weakness or aids to a failing endurance are, in the case of buildings, better than the premature destruction of treasures that must, in the course of nature, cease all too soon, and infinitely better than the substitution of a miserable sham for the simple truth of an ancient record. The existence or endurance of a building may be said to bear some resemblance to the life of a man. In its early days it is subject to developments, alterations, and corrections, and the very discipline, so to speak, which it thus undergoes does but fit it more perfectly for its ultimate purpose and work. The complete carving of its stones and polishing of its marbles may be the work of ages; as the years pass by the many-coloured garments of honour are added in its costly frescoes, and the glittering of its shimmering mosaics, until, like the strong man in his full manhood, it has reached its uttermost perfection, commanding and compelling our respect. And surely, when the storms of time have scarred it, and the lichens and ivy have woven the crown of age, if there be a sign of trembling in the pillars that once stood so firm on their rocky bases, or of crumbling in the walls that have withstood the shocks of earthquakes and echoed the voices of countless generations, it is a juster and a better thing to prop a yielding archway or buttress or sinking angle, than to neglect the tokens of weakness until the failure is complete, or than contemptuously to destroy, as unworthy of a thought, that which for so long had patiently and sternly done its work until the power of its enduring strength was spent, and it yielded to the hand of time.

It being admitted that in any given instance some new work is necessary to be added to or inserted in a building of former times, whether as a measure necessary for its preservation, or to fit it for its present use, the question arises, What character shall be given to this new work? The answer may be found in the practice followed in the best periods of artistic life, viz., that every piece of work should bear the stamp of its own day, and be the expression of the feelings and requirements belonging to that time. All the good art-work that has ever been done has been done upon this principle, unconsciously, no doubt, but none the less surely, and the only other principles possible to be followed inevitably result in the lifeless utilitarianism of "engineering," or a hopeless, helpless, copyism. We may ask, as has often been asked before, What is the value, in an old building, of a modern doorway or window, or any other feature which possesses only the questionable merit of resembling something designed and executed ages ago under totally different conditions? Whatever may be said in its favour, the simple fact remains that it is not the old feature whose place it occupies, and, therefore, having no intrinsic merit as an original work, its value is absolutely *nil*. It is clear, then, that any necessary work of alteration, addition, or repair should be not only undisguised, but should bear its own date suitably inscribed, and should be a consistent original work, properly designed to suit its position and purpose with the best available artistic skill.

The manner in which Italians generally, and the Venetians in particular, have received and commented upon the remonstrances and pleas addressed to them by various individuals and societies in England with reference to the proposed restoration of the façade of St. Mark's at Venice, though not always complimentary to ourselves, has perhaps been all that could be expected. It is perfectly natural, under existing circumstances, that any people so sensitive as Italians should be inclined to resent anything like our interference in the treatment of a building which is, of course, in the broad sense of the term, their own. An immense amount of willing reverence and admiration is lavished by foreigners upon the art-treasures of Venice, foremost among which stands the Church of St. Mark; but all this and much more would be of no account in considering the rights of the Venetians to deal as they might choose with their own, to pull down, rebuild, or blot out for ever anything upon the destruction of which they might determine, were it not that a monument of ancient art has acquired another value, another interest, over and above that usually recognised in its mere temporary possession as a piece of property, whether of an individual or a corporation, and far beyond that which would be accorded to it in the cold calculation of a formal code of law. The average duration of the life of a man,—that is, the time during which he can possess property and work his will upon it,—is but a small part of the period which a good building should, and usually does, endure; and while every one has the most perfect right to alter or destroy that which he himself has built or which has been lawfully given to him by others for his own exclusive use and possession, yet, when a building or work of art has, from whatever cause, ceased to be the property of an individual, and become that of a nation or corporation, the immediate possessors or authorities for the time being are, so to speak, merely trustees, whose duty is to preserve as well as use, and who are as much under an obligation to fulfil their trust as if there were an actual and definite superior authority to call them to account during their lifetime. Their account will be rendered to, and their stewardship judged by, those who come after them, and as the years go on, still the rights of possession and the number of possessors increase in ever-widening circles, till they extend far beyond the limits of the bare rock or shifting sand where the early builders laid with patient labours their foundation-stones, and reared their pinnacles towards heaven. While generation after generation of men passes away, leaving the records of its pride and sorrow, its genius and misfortunes, to enrich the fabric it has inherited, the old building is accumulating a store of interesting associations, until it comes down to us, in the garments with which it has been clothed by time, a priceless heirloom for our use and enjoyment, and which we have no right to destroy, but ought to pass on, uninjured as far as may be, to those who will come after us. We have no more right to rob posterity than to rob our neighbours of to-day, and small will be the respect with which our memory will be treated by our descendants if the best that can

be said of us be that, whether through carelessness or ignorance, through wanton ill-will or mistaken zeal, we have wiped out a record or lessened the value of a treasure which to them would have been a joy and delight.

And this makes England's plea for St. Mark's so strong and so justifiable: that the treasures of Venice belong not absolutely and merely to the Venetians of to-day or to the individuals in whose possession they are momentarily found; they belong to the time that shall come as they have belonged to the time that is past; they belong to us of to-day for our use and profit; they belong to the nation as a part of its history, and to posterity as its rightful heritage. It is mainly, if not solely, as a part of her history that buildings like St. Mark's belong to Italy, and because they do so belong we have the strongest possible reason for asserting that they ought to be reverently preserved, and that their faithful records ought not to be falsified or destroyed. Their intrinsic worth and excellence, their marvellous beauty, the lessons they teach and the interest of their connexion with the past, belong not alone to any one nation or set of individuals, but to all who can intelligently appreciate them; and it should be matter for pride rather than resentment on the part of the Venetian citizens that others as well as themselves are anxious to see their old basilica preserved.

No doubt the wide divergence of the points from which the question is viewed by the foreign memorialists on the one hand, and the Venetians themselves on the other, is quite sufficient of itself to account for the difference of their opinions; but the matter should ultimately be decided by a reference to the actual facts of the case, and its indisputable requirements, rather than by the prejudices or the wishes on either side.

In France and Italy the work of "restoration" has borne an aspect somewhat different from that which it has ever assumed in England. With us the work has always been undertaken by individuals, committees, or societies, representing the persons who either owned or felt an interest in the building in question, and these persons not only have had the sole control of any operations without external interference, but have also provided the necessary funds for their execution. On the other hand, upon the Continent the matter has frequently, if not usually, come under the cognisance of the department of public works of the Government for the time being. Sums of money have been voted for the restoration of such-and-such a building or buildings, and the works carried out in a manner directed or sanctioned by the central authority. This has been the case with the works already done to St. Mark's Church at Venice; this is what is being done at the present time in connexion with the Ducal Palace; and is what is proposed to be done with the rebuilding of the western façade of the church. No doubt, public works carried out in this manner are, independently of other considerations, a very fair and reasonable way of giving help to certain places or districts in time of commercial distress or famine; but it must not be forgotten that this makes those who need them, or who desire to benefit by them, less careful than they would otherwise be as to the exact nature and results of the works proposed to be done in return for the bounty of the Government, and much less severely critical of any scheme than if the cost were to be directly defrayed by themselves. No doubt, also, in times like the present, Venice would be only too glad to have a grant of three million lire, the estimated cost of the proposed works, poured through the pockets of her industrious workmen; but we may ask whether the price to be paid for this benefit, viz., the total destruction, the irreparable loss, of one of the fairest gems of ancient art that the world has ever seen, would not far outweigh any mercenary advantage.

It is quite true that some few repairs absolutely need to be done to the old façade, and it is matter for regret that these should have been neglected so long; but it is equally true that they are infinitesimally small in amount compared with the magnitude of the proposed works. There is no danger whatever of any kind to be apprehended as to the stability of the structure, nor is there a single indication which would justify the taking down and rebuilding of any one portion. Where the marble wall-facing is loosened it could be, and should be, at once refixed, and the places of missing portions filled with new, to form a protection to the brickwork behind; besides which various precautions might be taken to avoid for the future some influences which have proved injurious. All that is really necessary could be done, and well done, for the five-hundredth part of the sum proposed to be expended; and the ingenuity of Italian engineers would be fully equal to suggesting a score of ways in which public works of enormous magnitude and great ultimate benefit could be carried out without robbing the world of one more of its treasured links with the past. Our best hope lies in the gradual acknowledgment of the true principles upon which the value of St. Mark's and other like buildings depend, and those which should guide us in our treatment of them; and also, in this case, in the fact that among Venetians themselves there are not wanting accomplished and enthusiastic men, full of love and admiration for the treasures of their fair native city, and with an intelligent appreciation of their worth. Already their voices have been raised in protest against the wanton destruction of a monument which has long been legitimately their pride as well as their pleasure, and instead of resenting they have welcomed the assistance which foreigners have wished to give them. It is to be hoped that their reasonable counsels will prevail, and that we may be spared the sorrow of having to put another item on the list of victims to the mania for restoration.

For ourselves, it is to be hoped that, from the efforts we have been making to preserve a monument of art in Italy, will result, in the future, a more appreciative and intelligent attention to those still left in our own country, and that the energy and enthusiasm recently aroused will not be allowed again to slumber till the danger of a mischievous destruction, by whatever name it may be called, has for ever passed away from the priceless treasures of art scattered through the length and breadth of the world, and until their tender and loving preservation has become assured by the universal consent of an intelligent respect for the past, and an authority which ignores the small distinctions of creed or nation, but which unites all men of all climes in the worship of Beauty and Truth.

ARCHITECTURAL ASSOCIATION.

AT the ordinary fortnightly meeting of this Association, held on the 28th ult., Mr. S. Flint Clarkson, president, in the chair, the following gentlemen were elected members, viz., Messrs. E. J. Harrison, A. S. Henderson, S.A.P. Coxson, K. Tatsuno, F. W. Spittall, and A. E. Murray.

A vote of thanks was accorded to Mr. John Taylor, of H. M. Office of Works, architect of the new Police Courts and offices at Bow-street, for permitting the members to visit these buildings on the 22nd ult.*

It was announced (1) that the next visit of the Association would be to Hampton Court Palace this Saturday, June 5; (2) that the annual dinner of the Association would be held on the 22nd of June at the Holborn Restaurant; (3) that the annual excursion will take place in August; (4) that the Société Centrale des Architectes, Paris, had presented the Association with the first four volumes of the "Manuel des Lois de Bâtiment." A letter from the Secretary of the Society, accompanying the gift, was read, and on the motion of the chairman, a vote of thanks was given to the donors by acclamation.

Mr. John Hebb then read a paper by Mr. William Scott, Pugin Travelling Student (now in Rome, and, we regret to hear, suffering from nervous prostration) on "Restoration, and St. Mark's, Venice," which we print on other pages.

In the discussion which followed,—

Mr. William White, F.S.A., defended the proper and reasonable restoration of ancient buildings, which was, indeed, often a necessity when such buildings were used by the people of the present day, as, for instance, churches. Referring to St. Mark's, the speaker said that whatever was done, some means might be devised of temporarily removing the mosaics in complete plaques or panels, and of replacing them in the same condition; for if the mosaics were completely pulled to pieces, and the tesserae afterwards reset, the pictures would be almost sure to present the crudeness and rigidity characteristic of almost all modern mosaic work. He hoped that the protests which had been made by Mr. Scott and by others would have some effect in deterring the custodians of the basilica from too hastily proceeding to destroy work the loss of which would be irreparable.

Mr. Stannus said he differed entirely from the conclusions of the paper. Mr. Street, in a letter which he had published, had sought to show that it was the intention of the Venetians to entirely rebuild the whole of the western façade of the basilica; and supposing that he were right as to their intentions, what would be lost? The mosaics on that façade belonged to a late and inferior period. The middle one, it was true, was from a drawing by Titian, who, however, did not understand mosaic work. He (the speaker) could not help saying that the obliteration of the whole of the mosaics of the western façade would be no loss to art, or, at any rate, no loss in comparison to that which would be entailed by the destruction of the eleventh-century mosaics in the interior of the church. He was a member of the Society for the Protection of Ancient Buildings, but he believed it was possible to ride a hobby too hard. The Italians were, he thought, the best judges of what was necessary to be done in the case of St. Mark's, and they contended that owing to the subsidence of the soil it was necessary to undertake the proposed works to save the building as a whole. The Venetians had every reason to be proud of and for wishing that St. Mark's should live in the world as long as possible, and they perhaps knew more about it than we did. It was, indeed, more a question for the engineer than for the architect. It had been imputed to the Venetians that the work at St. Mark's had been primarily promoted for the sake of providing something in the shape of public works to satisfy the populace, but that was an unworthy imputation. Some such work as that proposed was a crying necessity, for the whole site of the city was going down inch by inch. It was only by a most complete and assiduous system of dredging that the municipality had been able to preserve Venice at all. If dredging operations were to be discontinued for ten years, Venice, and St. Mark's with it, would be a thing of the past. The Italian engineers were as clever as English engineers, and their prescience was notably shown in the case of the Mont Cenis tunnel. If they were to be relied upon in the present instance, it was matter of choice between keeping the *crus* and letting the façade go. In conclusion Mr. Stannus moved a vote of thanks to Mr. Scott for his paper, and to Mr. Hebb for reading it.

Mr. H. W. Pratt said that Mr. Street's letter seemed to show most conclusively that serious injury would be inflicted on the western façade if the proposed works were carried out. As far as he (the speaker) had been able to ascertain, the building was never on a level, the subsidence having taken place at the time of the original building. He thought that the Society for the Protection of Ancient Buildings would not thank Mr. Stannus for coming forward and, as a member of that body, complacently consenting that the mosaics of the western façade might go, for although undoubtedly some of the mosaics of the western façade were of comparatively recent date, yet they certainly came within the scope of the Society's solicitude. The whole dispute as to St. Mark's turned upon the question whether the building was really safe or not, whether any subsidence was going on, and whether anything could be done to avert the threatened danger.

Mr. Hebb said he could not at all agree with Mr. Stannus with regard to the mosaics of the western façade of St. Mark's, which, it was true, were of somewhat late date, but they had, by the lapse of time, acquired a certain tone which it would be matter of regret to many to see removed or in any way interfered with by restoration. Mr. Stannus had argued, and no doubt upon good grounds, that the Italian engineers were very ingenious, and would know what to do to secure the safety of the basilica; but if the question of the proposed restoration were one appertaining only to engineers, let it be treated by engineers in an engineering spirit. Mr. Stevenson, when in Venice lately, made a very careful survey of the building, and now Mr. Scott, who had had exceptional opportunities of examining the building during a rather protracted stay in Venice, had confirmed Mr. Stevenson's opinion that, even admitting for the nonce the present instability of the building, it was possible, by the use of iron ties and bands, and by resorting to underpinning, to preserve the façade without "restoring" it. Mr. Hebb quoted the following extract translated from an

* View, plan, and description were given in last year's volume of the *Builder*, pp. 686-90.

article by M. Charles Yriarte in the *Revue des Deux Mondes*, entitled "Les Restaurations de Saint Marc de Venise" * :—

"What has been particularly deplored in the restoration of St. Mark's is the absolute destruction of that general harmony of the building which is the result of the action of time, the effect of atmosphere, of hygrometric conditions, and of natural combinations, acting upon the whole surface of the building under the influence of a climate like that of Venice. This *patina* of which the manifesto [of the Society for the Protection of Ancient Buildings] speaks so eloquently is not a matter of indifference or of conventionality. It is the glaze [*glacis*] of the picture, the envelopment, the mystery, the poetry, the harmony, in which all the tones of the architectural palette are blended. In Southern Italy it is the powerful ruddy colouring with which the warm rays of the sun has clothed the temples of Pæstum; in Greece it is a silvery veil which centuries have cast over the marbles of the Acropolis. At Westminster, at Hereford, at Canterbury, it is [a sinister leprosy which devours the building and wraps it in a sombre livery that has its grandeur and its poetic aspect. In France our most celebrated architects and archæologists, Lassus, Viollet-le-Duc, Ruprich-Robert, Duban, Boeswilwald, endeavoured in vain, while religiously restoring our ancient basilicas and palaces, to anticipate the effect of time by seeking to imitate upon new work that precious colour without which there is neither character nor true grandeur. But at Venice we are in this respect under very special conditions; the scheme of decoration is, at the same time, pictorial and architectural, and the general effect is the result of the juxtaposition and grouping of materials of various colours, further intensified by the lively tints of gilding and of compositions executed in brilliant mosaics. As if marble, gold, colour, and glittering enamels were not enough, the primitive architects incrusted into this grand reliquary fragments of antique marble [*cabochons*] and rare stones. Special atmospheric conditions, the salt air of the Adriatic, a constant humidity, and the powerful rays of the sun have exerted their influence upon this combination for more than 900 years; the serpentine, the granite, the cippolino, the breccia, the Oriental alabaster, the verd-antique, the African marbles, polished like gems, have acquired at length an extraordinary intensity, and have become raised to the key of the most vivid colours of the palette, while the cubes of vitrified gold which formed the backgrounds, too strong and glaring to the eye, are veiled under an impalpable haze, delicate as that with which a skilful artist covers over an object which interferes with the harmony of a picture. The hand of man cannot throw this harmonising veil over buildings; it is the work of centuries; it is the hand of Time, and the hand of Him who was before Time was."

Now, if the western front of St. Mark's were to be rebuilt, the peculiar colour or *patina* spoken of must inevitably disappear. As to the question of the stability of the structure, that was a question which would have to be gone into thoroughly. He thought that the action of the Italian Government in the matter was to some extent an acknowledgment of the justification of the agitation which had taken place, for they had given orders that the work should not be proceeded with until some further investigation had been made, and that would seem to imply that they were not thoroughly satisfied that the work as at first proposed would be undertaken with sufficient consideration for the building.

Mr. Blashill said it struck him that the question of the restoration of St. Mark's would bear a great deal more looking into by both parties to the dispute, who should endeavour to disencumber themselves of the prejudices with which they had approached and had continued to regard it. The effect of prejudice was observable in the fact that gentlemen whose training as architects and archæologists ought to enable them to arrive at a common conclusion were found to differ. He could not help expressing his dissent from that part of Mr. Scott's paper which embodied the old prejudice, for the revival of which the Society for the Protection of Ancient Buildings was largely responsible, that buildings which had come down to us from the past were not the property of the present generation to do as they liked with. That was a most egregious fallacy, and one which, if persisted in, would, he believed, tend very much to damage the cause which the Society desired to promote.

The Chairman having put the vote of thanks, the meeting came to a close.

We may add that the officers of the Association for session 1880-81 were nominated, Mr. Ernest C. Lee being named as President.

Fall of a Bridge.—A bridge which has just been erected over the Ogwen river at Bangor, near one of the entrances to Penrhyn-park, in place of an old structure which was swept away by last year's floods, suddenly collapsed on Tuesday night, the entire roadway falling into and blocking up the river. Some cattle which were being driven over went down with the débris, but no foot passenger was injured. The accident is attributed to the removal of the centres before the arches had properly set.

* Noticed in the *Builder*, p. 628, *ante*.

THE HEALTH OF ROME AND THE WORKS ON THE TIBER.

THE *Giornale dei Lavori Pubblici*, of Rome, of May 12, publishes an appeal made to the Minister of Public Works as to the danger to the public health involved by the present scheme for the walling of the Tiber through that city. The removal of all obstacles that raise the level of the bed of the river has been generally admitted to be the first object that should be sought by the engineer. From 50,000*l.* to 60,000*l.*, however, has been already spent on the works, and no attempt to remove the most mischievous bar in the channel, that caused by the ruins of the Pons Triumphalis, has yet been made. Heavy indemnities have to be paid for the ground required for widening the bed of the river, above the Ponte Sisto, to the prescribed width of 100 mètres. The works here carried on have been rich in archæological discoveries, but have caused, the writer of the appeal in question states, an outbreak of fatal fever in what was formerly the most healthy quarter of Rome. And they have served, as do the present condition of the Pantheon and that of the Cloaca Maxima, to prove distinctly the fact of the raising of the bed of the river. To build enormous quay walls, 18 mètres high, through the city, without either deepening the channel of the Tiber, or carrying down the foundation of the walls themselves to an adequate depth, is, it is urged, worse than useless. The rectification of the channel of the river below Rome, and the encouragement of an effective scour, by removing such obstacles as are caused by fallen bridges, are evidently objects of primary importance with a view to diminish the effect of floods.

Published figures show that the fall of the river in its course through Rome is nearly three times as rapid as that which is obtained to the west of Ripa Grande; and this is enough to show the effect of such obstacles to the current as those of which the writer in the *Giornale* complains. The Ponte Sisto, the two bridges to the Isola di San Bartolomeo, and the remains of the Sublician Bridge, all form obstacles to the scour of the river through Rome. But even were these removed, the fall to the sea is not such as to promise much lowering of the channel by natural erosion alone, although it is clear that the rectification of the channel below the city, and the removal of every obstacle to the current, is a work of at least as much importance to the safety and health of Rome as are the new quay-walls of the Tiber.

AMALGAMATED CARPENTERS AND JOINERS' SOCIETY.

THE twentieth annual report of the above-named Union "presents a remarkable contrast when compared with previous yearly records of the Society's operations." This is the opening sentence of the Report for 1879, which goes on to say:—"For several years it was a pleasant duty to announce a steady increase in the number of our branches and members, and large additions to our capital. If we consider the accumulation of funds to be the great end and aim of our organisation, we must admit that the year 1879 contrasts very unfavourably with some of its predecessors; but if we believe that our Society has best fulfilled its higher mission when it has rendered most effectual assistance to its unemployed, sick, and distressed members, we may review the work of the past year with feelings of pride and gratification."

The Report for 1879 consists of 272 pages, and thirty-two of introductory matter, summaries, and tables. Of the former, 204 are appropriated to branch reports, in which are given full details of income and expenditure; nine are devoted to general office accounts, special funds, and a statement of the net income and expenditure; the obituary for the year occupies twelve pages; an abstract of the accounts takes up fourteen pages; the list of excluded members fills thirteen pages; the remainder contains the names and addresses of officers, lodge-houses, and similar information.

At the end of the financial year the Society had 342 branches; of these 293 were in England and Wales, 16 in Ireland, 7 in Scotland, 10 in America, 5 in Canada, 2 in Australia, and 9 in New Zealand. Nine new branches were opened during the year,—5 in England, 2 in Ireland, and 2 in New Zealand. Five branches have been closed through slackness of trade, leaving a net gain of 4.

The total number of members at the end of last year was 17,034; there has been an increase in members of 460. The number of new members admitted was 2,049; the number excluded, chiefly through arrears of contribution, was 1,587. The Secretary observes that the increase in numbers was due more to fewer exclusions than to additional admissions; and he argues that the men better appreciate the many advantages offered by the Society than they did formerly. And certainly, if regarded only as a benefit society, there are not many that can be compared with it for material benefits.

The net income for the year was 39,854*l.* 17*s.* 5*d.* In 1878 it amounted to 41,598*l.* 14*s.* 3*d.*, showing a decrease of 1,743*l.* 16*s.* 10*d.* But the extra arrears of contribution caused by depression in trade will more than make up the deficiency. The principal sources of income were: Contributions, fines, and levies, 36,515*l.* 8*s.* 3*d.*; entrance-fees and proposition money, 1,505*l.* 13*s.* 10*d.*; bank interest, 1,541*l.* 0*s.* 2*d.*; reports, rules, cards, and emblems, 287*l.* 3*s.* 8*d.*; the balance, 5*l.* 11*s.* 5*d.*, was received from closed branches, &c. One reason why there has been a falling off in contributions is that members in receipt of benefit are exempt from the usual weekly payments; their pay is thus augmented to this extent, while the Society is proportionately the loser in income. The greater the strain, therefore, on its funds, the less is its capacity to bear it.

The total expenditure for the year was 62,446*l.* 1*s.* 4*d.*, being in excess of the income to the extent of 22,591*l.* 3*s.* 11*d.* The principal payments were: Unemployed benefit, and sending members to situations, 28,189*l.* 14*s.* 3*d.*; sick benefit, 11,008*l.* 10*s.* 7*d.*; medical certificates, 270*l.* 14*s.* 11*d.*; accident benefit, 1,500*l.*; funeral allowance, 2,003*l.*; superannuation allowance, 444*l.* 15*s.* 4*d.*; loss of tools, 997*l.* 0*s.* 7*d.*; grants from the contingent and benevolent fund, 807*l.* 2*s.* 4*d.* Total for benevolent purposes alone, 45,220*l.* 18*s.* The whole of this vast sum was spent in alleviating distress resulting from bad trade, ill health, accidents, old age, or death.

The amount expended in support of trade privileges—that is to say, strikes—and the incidental expenses connected therewith, including arbitrations, conciliation courts, law costs, &c., was 10,558*l.* 1*s.* 9*d.*; in 1878 the amount so spent was 12,291*l.* 16*s.* 9*d.*; being a decrease on the year of 1,733*l.* 16*s.* The major portion of this expenditure was incurred in resisting reductions in wages or attempts to increase the hours of labour. For the most part the attitude of the men was defensive, striving to maintain what had been previously won. The results of their action will be seen further on.

Management expenses may be thus summarised:—

Salaries:—342 branch secretaries and general secretary	£1,232	2	5
" Branch treasurers and general treasurer	469	3	5
" Branch sick stewards	486	0	5
" Other branch officers and committees	752	4	10
" Auditing accounts	250	7	6
Delegations on various matters of the Society	329	8	8
Executive Council Meetings	107	9	8
American District Committee Meetings	4	8	0
Banking expenses, loss of time of treasurers, and others	216	15	4
Rent, coal, gas, rates, and taxes, cleaning, &c.	855	1	7
Summoned meetings on special business	63	0	1
Total,—general office and all the branches	£4,756	0	11

The other items of expenditure include printing and stationery, 1,170*l.* 1*s.* 5*d.* As a set-off to this, 287*l.* 3*s.* 8*d.* was received for reports, rules, cards, and emblems, leaving 883*l.* 17*s.* 9*d.* Postage, parcels, telegrams, money orders, &c., absorbed 418*l.* 6*s.* 2*d.*; boxes, bags, seals, and other branch property and repairs, 175*l.* 18*s.* 2*d.*; grant to the Parliamentary committee, 35*l.*; defalcations, 61*l.* 13*s.* 3*d.*; the balance consists of a few small items.

The printing included 84,000 monthly reports, 17,500 annual reports, and nearly 200,000 copies of other reports, lists, voting-papers, cards, circulars, schedules, &c., besides the numerous books required for the use of the several branches and general office. All these various publications, forms, &c., are printed under the supervision of the executive, and are sent by the general secretary to the branches as they need them.

The cash balance at the close of the year was 48,779*l.* 3*s.* 5*d.* In addition to this, however, the property and stock of the Society, including two freehold houses at Manchester, are valued at 4,793*l.* 19*s.* 2*d.*; so that the total worth of at 4,793*l.* 19*s.* 2*d.*; so that the total worth of the Society is stated to be 53,596*l.* 2*s.* 7*d.*, or

3l. 2s. 11d. per member. At the end of 1878 the cash balance was 71,370l. 7s. 4d.; the decrease on the year was therefore 22,591l. 3s. 11d. As a set-off to this, there was due, as arrears from members, 3,773l. 15s. 4d.; this amount must be added to the cash balance as an available asset. The financial condition of the Society is thus fairly good, when the whole of the circumstances are taken into consideration.

The general office accounts, though included in the foregoing totals, are given separately. The income for the year was 2,104l. 19s. This sum was made up as follows:—Forty-two of the wealthier branches contributed 50l. each; the remainder consisted of a few small items. The expenditure for the year was 2,126l. 9s. 9d.; this included 104l. 16s. 8d. for seventy-nine executive meetings, inclusive of travelling expenses, seven of which were day meetings; seven meetings of the printing committee, 2l. 13s.; ground rent, rates and taxes, coal, gas, insurance, and cleaning offices, 68l. 4s. 8d.; general secretary's salary, 156l.; office assistance, 82l. 6s.; treasurer's salary, 8l.; and repairs to offices, furniture, and branch property, 50l. 0s. 3d. The major portion of the remainder was for printing, stationery, postages, telegrams, money orders, branch properties, as before given.

The death-roll contains the names and particulars of death of 134 members, and 112 members' wives; heart and lung diseases carried off the greater number in both cases. The average ages were,—Men, 40¾; women, 35¼; and, for twenty years, 35¼ and 32¼ respectively.

The report contains a series of interesting tables, giving an account of the progress of the Society in numbers and funds from the date of its being founded; the expenditure in each year under its several heads; the rates of wages and number of working hours in all towns where the Society has branches, and other useful information. In one town only did the members succeed in gaining an advance of wages; in fifteen they obtained a reduction of working hours in winter. Reductions in wages had to be submitted to in fifty-two towns, ranging from 1s. to 6s. 11¼d. per week; the working hours were increased in nine towns from 1½ to 5½ per week.

Table III. contains a detailed epitome of the amounts paid in each year, for twenty years, for the various benefits. The following is a summary of the several columns:—

Unemployed benefit, including travelling	£96,936
Loss of tools by fire, water, or theft	9,968
Sick benefit	91,034
Funeral expenses	17,767
Accident benefit	11,150
Superannuation allowance	2,351
Benevolent grants to distressed members	7,297
Total for benevolent purposes	£236,484
Paid for trade privileges (strikes)	59,635
Grants and loans to other trades	1,802
Total for 20 years	297,921

The entire report is creditable to the officials; the accounts of every branch are so itemised and clearly arranged that all members of each branch can ascertain for themselves the details of income and expenditure in all the branches, and of those also appertaining to the general council of the Society. While it is one of the youngest of what are called the amalgamated societies, it is certainly the most vigorous and flourishing, and seems, in many respects, the best conducted of them all.

VALUE OF BUILDING LAND AT CHINGFORD.

ON Saturday evening last several plots of freehold building land were sold by auction at the Forest Hotel, near Queen Elizabeth's Lodge, Chingford, by Mr. Whittingham, of Bishopsgate-street. The property consisted of the first portion of the Suffield Hatch Estate, comprising upwards of seven acres, which have been recently laid out for building purposes. The lots offered were fifty in number, described as having frontages to the old parish road and to several new roads which have been formed on the estate, and as being suitable for the erection of small houses or cottages, which were said to be in great demand in the locality. The particulars added that the rapid growth of Walthamstow, and the extensive building operations, were daily increasing the price required for building land in the neighbourhood. The conditions provided that no house should be erected on the estate of less value than 150l., and that shops or manufacturing premises should be erected in one street only. It was likewise provided that there was to be only one public-house on the land. The auctioneer drew attention to the circumstance that the plots to be offered formed a perfectly new neighbourhood, and that no land near to it had yet been sold on the instalment principle. With the exception of a few corner plots, having frontages of from 20 ft. to 39 ft. each, the several plots were stated to have frontages of 15 ft., with an average depth of 108 ft. Out of the fifty lots offered, thirty-seven were sold, the lots fronting the parish road realising 1l. 15s. a foot, and those to the new roads leading therefrom 1l. 5s. per foot frontage, or about 26l. and 20l. per lot respectively.

ST. EUSTACHE, PARIS.

ONE of the noblest monuments left us by the early Renaissance architects is the magnificent church of St. Eustache, Paris. Probably no building in existence shows such a complete admixture of Gothic and Classic architecture,—the general plan, arrangement, proportions, and disposition of various parts being thoroughly Gothic, whereas the details and working out are as thoroughly Renaissance. So much is this the case that, although at first sight, one would, without doubt, pronounce the church to be a Gothic building, upon closer inspection it will be found that there is not one real Gothic feature about it, nor does the pointed arch once occur in the whole edifice; in fact, the builders seem to have been so determined not to use that form of arch that in the apse, where the spaces were too narrow to allow of the semicircular arch, the windows and other openings have elliptical and half oval heads. Yet, with all this apparent dislike to the Gothic forms, the plan of the building is essentially Gothic. It consists of a nave of five bays flanked by double aisles and rows of chapels on either side, transepts, a long choir, also with double aisles, and a *chevêt*, with a nearly circular lady-chapel to the east. Externally the clerestory is supported by double flying-buttresses, and there is a high-pitched roof with a pretty *flèche* over the "crossing." The doorways, especially that to the south transept, are remarkably fine, and are adorned with most interesting canopy-work, and excellently-carved arabesques. The tracery is of the curvilinear, form, enclosing hearts or ovals in the heads of the windows; but here, as elsewhere, the pointed arch never appears, the lights being either ogee or semicircular. There is no cusping, and the mullions and traceries are of one order.

The west front is a later addition, by Mansard, but whatever merit it may possess in itself, it is so badly fitted on to the church, and so ill-suited to the building, as to add little to that architect's reputation.

The dimensions of the church of St. Eustache may be roughly stated as follow: length, 290 ft. exclusive of portico; width, 130 ft.; height to vaulting, 110 ft.

Unfortunately, the name of the architect is unknown, but the exact date of the commencement of the existing structure is recorded. The first stone was laid by Jean de la Barre, Provost of Paris, on the 19th day of August, in the year 1532.

An able article in the *Moniteur des Architectes* of March 15th, 1852, very justly points out that the belief generally held that St. Eustache was designed by Charles David is evidently erroneous, as that architect was not born until 1552; that is, twenty years after the commencement of the church, though there is a great probability that he was engaged upon the building, which was for many years in course of construction, and possibly he may have carried out the design of the original architect to its completion.

The writer of the article in the *Moniteur* throws out a suggestion that the church of St. Eustache may have been designed by Dominick of Cortona, an Italian, who in 1533 was engaged upon the buildings of the Hôtel de Ville, and supports this theory by the great resemblance which exists between some of the details of the two edifices. Although we are inclined to admit the fact that the similarity of detail is so marked that the same hand must have been at work on both buildings, we cannot for a moment believe that the general design for the two was given by the same architect; for there is this great difference between them,—St. Eustache is essentially a Gothic building with Renaissance detail, whereas the Hôtel de Ville is a pure Renaissance structure, with details which have the characteristics of a somewhat earlier date, and we could imagine nothing less like an Italian sixteenth-century church than St. Eustache. We are rather of opinion that not only is St. Eustache totally French as to design, but also that the details of the Hôtel de Ville which resemble those of St. Eustache are also the work of Frenchmen. That the French were quite capable of designing and executing Renaissance works of great beauty and delicacy is proved by the fact that in the year 1528 the designs of Pierre Lescot were preferred to those of Sebastian Serlio for the reconstruction of the Louvre,* and the general design of Lescot, assisted by the beautiful details of Jean Goujon, serve to prove that the French had, at the time of the commencement of the church of St. Eustache, developed a beautiful Renaissance architecture of their own, though it was many years before they were willing to abandon the Gothic form of church; for not only in St. Eustache do we find the Gothic plan and general design united and combined with Renaissance detail, but also in St. Étienne du Mont, 1537-1605; the choir of St. Jacques de Haut Pas, commenced in 1630; the choir of St. Leu, 1611; some portions of the church of St. Merrie, completed in 1611; the choir of St. Médard, 1561-1586; the choir and aisles of St. Nicolas des Champs, commenced 1576; the greater part of the church of St. Laurent, 1548-1594; and many other churches which we could mention in Paris and its neighbourhood. If we were to hazard an opinion respecting the architect of the church of St. Eustache, we should suggest that he was a Parisian, and was probably the same man who erected the church of St. Étienne du Mont, the choir of St. Nicolas des Champs, and St. Laurent. It seems strange, however, if our conjecture be true, that his name should be unknown. Our engraving of St. Eustache is from a drawing made for us on the spot.

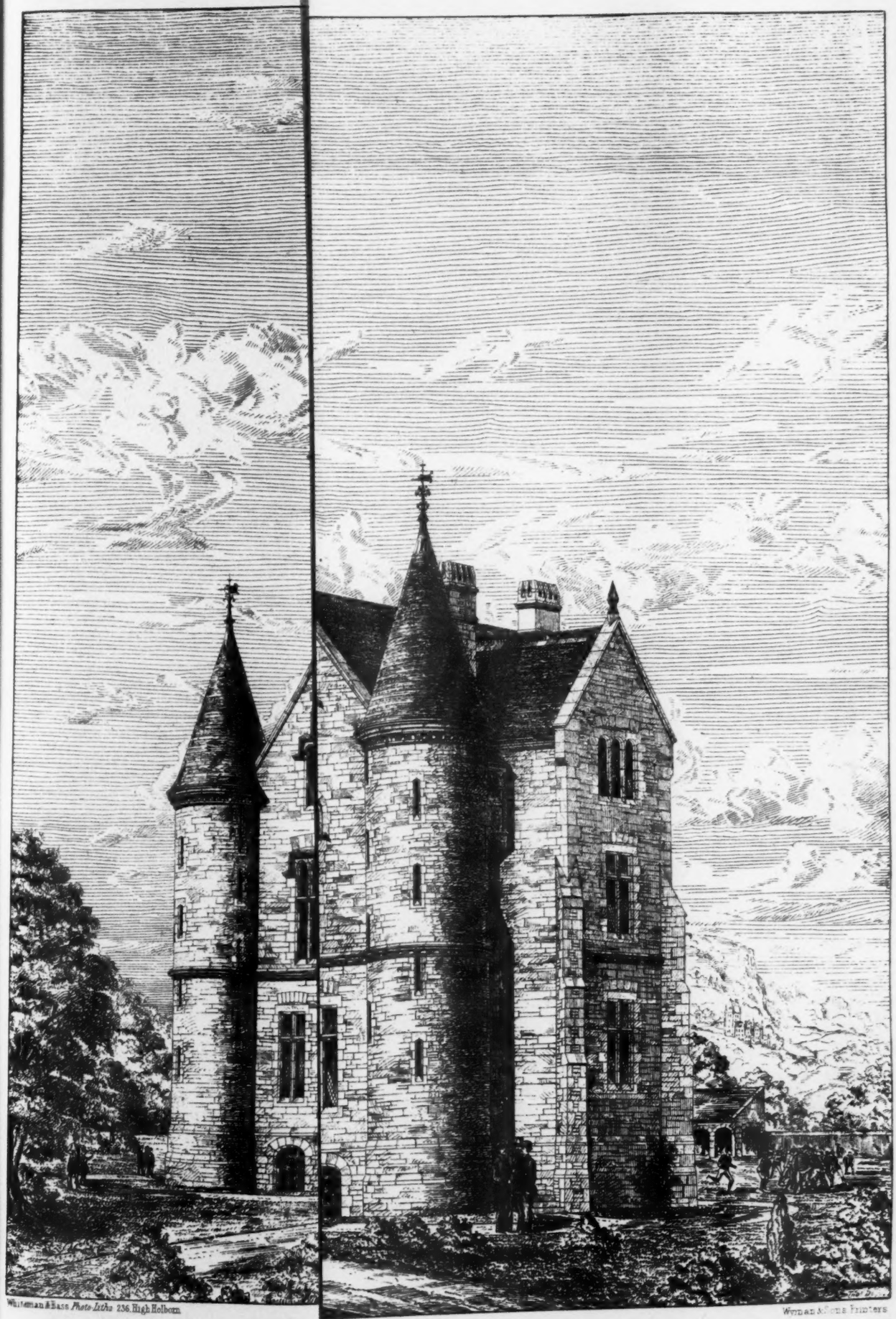
NEW BUILDINGS FOR THE BELFAST ACADEMY AT CLIFTONVILLE.

THE original buildings occupied by the schools of the Academy from the year 1785 till the present time have been sold by the managers of the trust, who are now erecting the new schools upon a more open and commanding site, in one of the suburbs of the town. The plan comprises an outer porch under the central tower, which rises upwards of 100 ft. in height, and an inner hall, from which access is obtained to the English, classical, mathematical, and writing schools, master's room, bursar's office, and porter's lodge. The main staircase is situated at the rear of the hall, and gives access to the common hall, a library, board-room, and several class-rooms. The upper floor contains large dormitories, with master's room attached, separate entrances are also provided for the boys in the circular turrets flanking the building. The basement will be utilised as a covered playground in wet weather. The buildings have been planned with a view to future extension, but at present will accommodate upwards of 300 boys. It is intended to proceed, at an early date, with the erection of the principal's and masters' houses, in connexion with the main buildings. All the exterior walls are built of Scrabo sandstone. It is expected that the new schools will be opened in August. Messrs. T. Dixon & Company are the builders, and Messrs. Young & Mackenzie the architects.

COTTAGE HOSPITAL, MILNTHORPE.

THE foundation-stone was laid last week of Kitching's Memorial Cottage Hospital, by Mrs. Bindloss, daughter of the late Mr. John Kitching, M.R.C.S.Eng. The architect is Mr. Eli Cox, of Kendal. The style of the building is a modernised Domestic Gothic, of plain description. The front is divided into three wings; the central one will be the residence for the matron, the side wings are wards for men and women, each 21 ft. long by 17 ft. wide and 14 ft. high. In the upper part of the central wing there are also two wards for each sex, 27 ft. long by 8 ft. 6 in. wide; behind the central wing are the kitchens, surgery, mortuary, and so on. The hospital will accommodate about twenty patients, and will be built and supported solely at the expense of Mrs. William Bindloss, as a memorial of her late father.

* Description de la Ville de Paris. Germain Brice. 4 vols. Paris. 1752.



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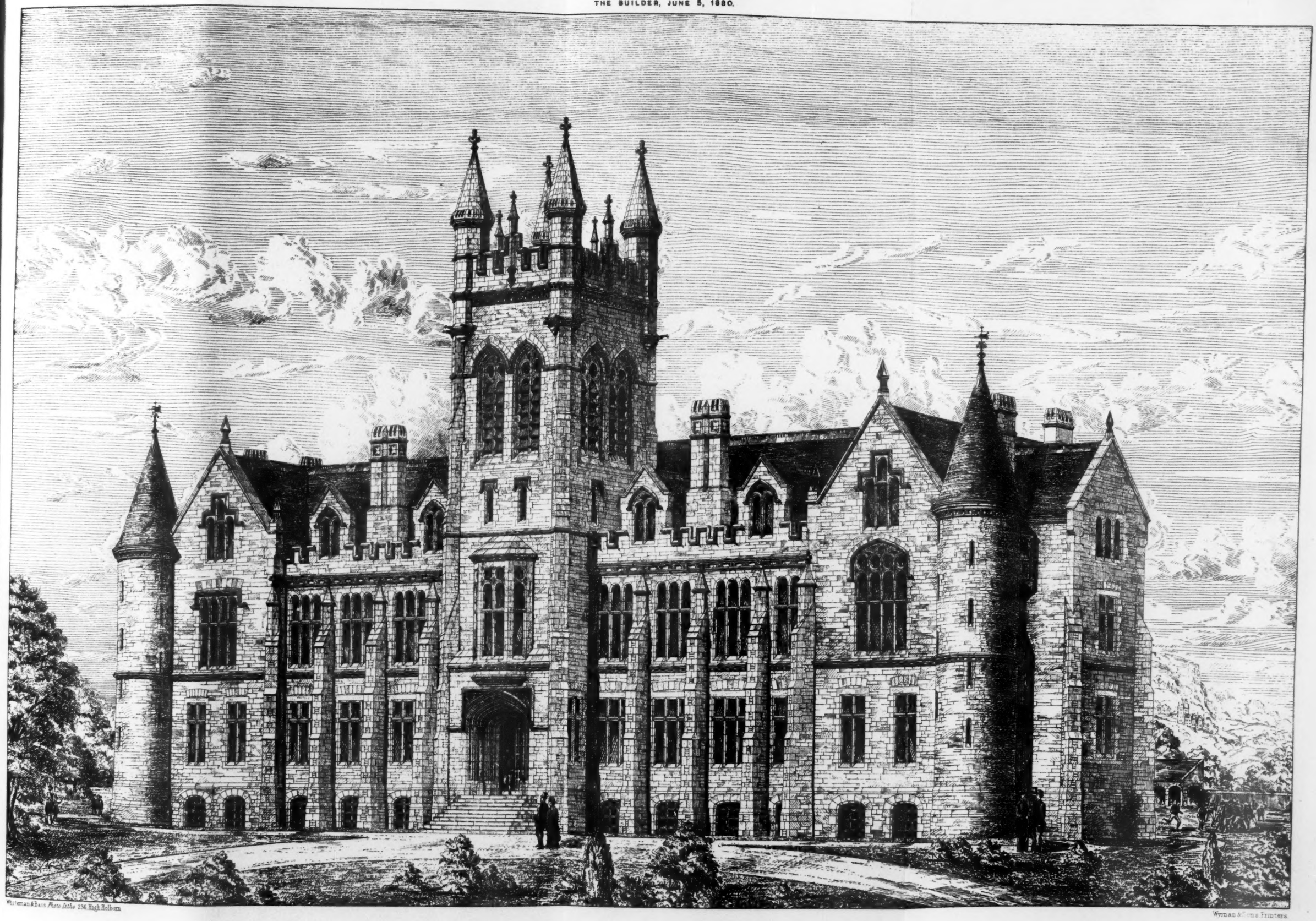

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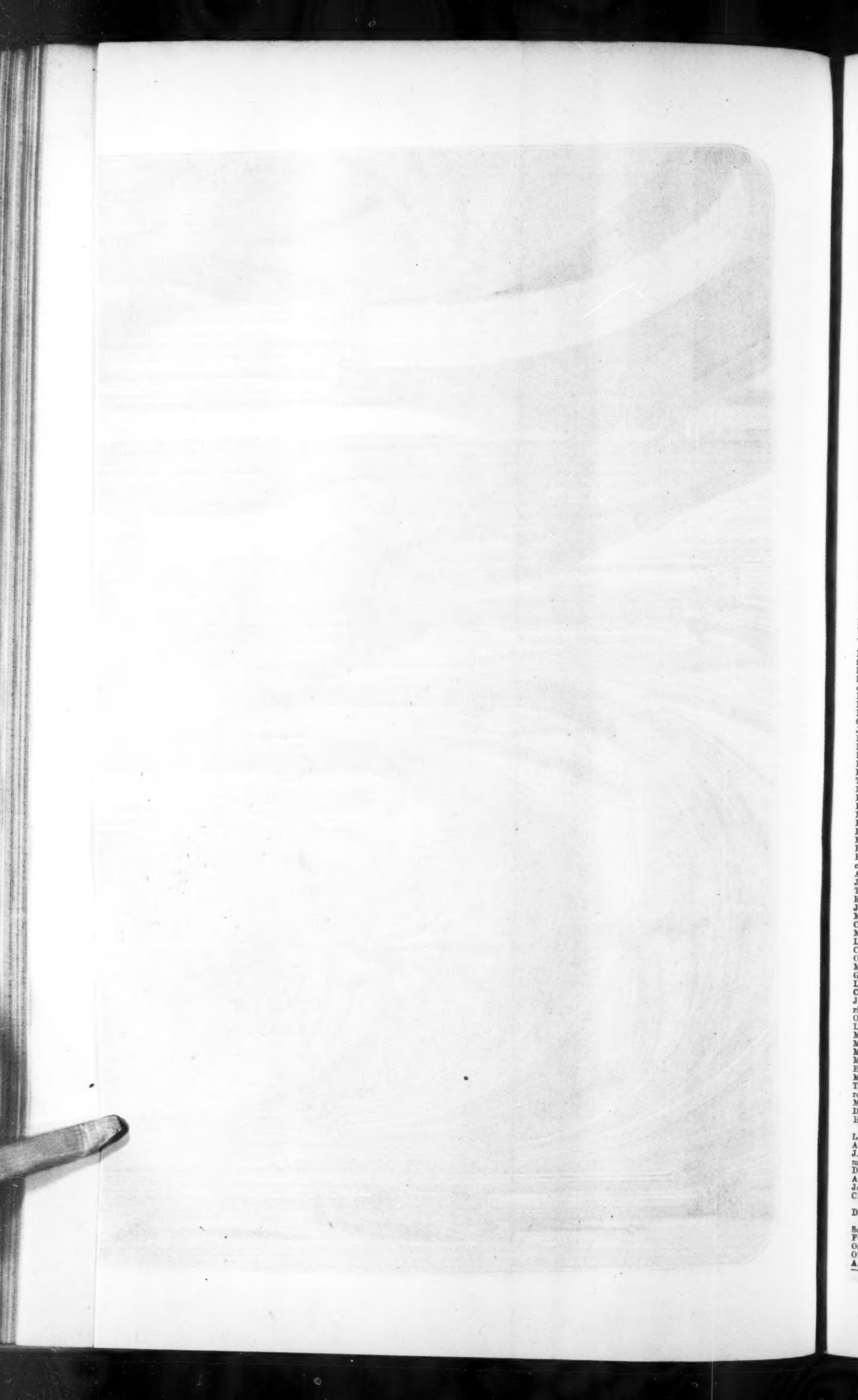
NEW BUILDINGS FOR THE BELFAST ACADEMY, AT CLIFTONVILLE.—Messrs. Young & Mackenzie, Architects.

ST. EUSTACHE, PARIS: Commenced A.D. 1532.—Drawn by H. W. Brewer; Engraved by A. Berry.



PUBLIC ARCHITECTURAL COMPETITIONS.

THE MEMORIAL TO THE PRESIDENT AND COUNCIL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

The following list gives the remainder of the names of the signatories to this memorial.*

Karslake & Mortimer, London; Keeling, Basset, London; Keir, Thomas, Blairgowrie; Keirle, Robert, F.R.I.B.A., London; Kelly, W. Henry, Chester; Kelsey, Walter, Horley; Kemp, Fredk. Nesbitt, London; Kemp, Welch, & Pinder, Bournemouth; Kempson, Frederick E., Hereford; Kempstor, J. F., Ballinasloe; Kennedy, G. Penrose, Glasgow; Kennedy, Henry, Bangor; Kerridge, James S., Wisbech; Kersey, A. H., A.A., London; Kidner, Wm., F., London; King, Charles R. B., A., London; King, Zephaniah, A.A., London; Kinnear, R. K., Dumfries; Kirk, Charles, M.A., Blesford; Kirkley, C., A.A., London; Kirby, Edmund, A., Liverpool; Kisching, W. H., Hull; Knapp, Louis, London; Knapp, W. Kenyon, Manchester; Knight, John M., F.G.S., London; Knight, Samuel, F. & A. A., London.

Lacey, Arthur T., Norwich; Lacey, F. W., London; Lacey, J. Fredk., London; Lainson, Thomas, F., Brighton; Lamb & Armstrong, Newcastle; Lamb, James B., I.A., Paisley; Lambert, George F., Bridgend; Lanchester, R. T. J., A., London; Lander, R. S., F., London; Langford, Chas. F., Wisbech; Langford, Geo. E. S., A. & A. A., London; Langrish,* R., M.R.I.A.I., Kilkenny; Langston, H. Hardwicke, London; Lanyon, John, F., Belfast; Large, W. A., Westminster; Laslett, Thomas N., London; Law, Edmund, Northampton; Law, R. F., F. & Northampton A.S., Northampton; Law, John, & Son, Batley; Lawrence, Benjn., Newport; Lawton, James, Manchester; Lavender, Joseph, M.I. Surv., London; Lavender, R. M., Watford; Lee, Frederick, M. Inst. Surv., London; Lee, John L., London; Lee, Philip B., A.A., London; Leeming & Leeming, Halifax; Lees, Henry, Preston; Lees, Wm. Hewson, A., London; Leighton, Fred. B., N.A.A., Lambton Grange; Leiper, William, I.A. & Glasgow I.A., Glasgow; Lemon, James, F. & M.I.C.E., Southampton; London, R. W. P., London; Le Rossignol, Francis, London; Leslie, James, Carlisle; Lettis, William, Brechin; Leuchars, Edgar, F., London; Lewcock, R. A., London; Lewis, Lawrence, Glasbury, R.S.O.; Lewis, J. C., Woodford; Lewis, John, Newcastle-under-Lyme; Lewis, Thomas, Newcastle-under-Lyme; Lewis, William, & Son, York; Lish, Joseph J., Newcastle; Little, Wm., & Son, Kirkcaldy; Littler, Henry, Manchester; Littler, Henry, Manchester; Livesey, Wm., Northern A.A., Darlington; Lloyd-Williams, W., Carnarvon; Lockwood, Francis D., London; Lockwood, Thos. M., Chester; Lockyer, Gilbert, London; Loe, W. G., London; Lofthouse, Alfred, Huddersfield; Löhr, Charles Henry, A.A., London; Lomas, H. D., Sheffield; London, James, Liverpool; Looker, J. W., Slough; Lowry, Frederick, Great Grimsby; Luff, Henry Geo., A., London; Lulsham, Alfred, A., Liverpool; Lund, T., & Son, Worthing.

Macara, Neil, A., Darlington; Macdermott, Martin, London; Macdougall, Edwd. H., Rotherham; Macfarlane, D., Greenock; Mackenzie, David, Birmingham; Mackenzie, Hugh J., A.M.I.C.E., Elgin; Mackenzie, J. Ford, Southport; Mackenzie, J. Russell, Aberdeen; Mackillop, John, Oban; Mackinnon, James P., M.R.I.A.I., Belfast; Mackintosh, William, Inverness; Mackland, John, A.A., London; Maclaren, James, & Son, Dundee; Macpherson, Alex., Derby; Maguire, Joseph, C.E., Dublin; Maitland, A., & Sons, Tain; Malcolm, John, London; Mansell, Thos. H., Birmingham A.S., Birmingham; Mantell, Edw. W., A.K.C., Hanwell; Marks, D. C., Forest-hill; Marks, Edmund, London; Marsh, Joseph C., Belfast; Martin, Alfred J., A. & A.A., Plaistow; Martin, William Ed., Hereford; Martineau, Edw. H., F., London; Mason, Jas. S., Arbroath; Massa, Thos., F.R.S., Plaistow; Masters, Henry, Bristol; Mather, Robert B., Blackpool; Mathews, J. Douglass, F., London; Mattier, Wm. S., Belfast; Maude, John, Halifax; Maylard, Charles G., A. & A.A., London; McAlister, Alex., Belfast; McCarthy, J. J., R.H.A. & F., Dublin; McElwee, William, M.R.I.A.I., Londonderry; McLachlan, John, Edinburgh; McLeod, John, Glasgow; McMillan, Duncan, Aberdeen; McNaughten, D., Glasgow I.A., Glasgow; Medland & Son, Gloucester; Megget, John, Birmingham; Meldrum, R., Edinburgh; Mellor, W., Manchester; Melrose, George, Rothesay; Meeson, Frederick, A., London; Melvin, John, & Son, Alloa; Mender, Fredk. John, Wimborne; Mercer, John, I.A., Ayr; Mercer, Thomas, Liverpool A.S., Liverpool; Meredith, J. T., Kidderminster; Micklam, T., Winchester; Micklethwaite, J. T., F.S.A., London; Middleton, John, F., Cheltenham; Middleton, J. Henry, F.S.A. & A., London; Miles, Charles, F., Bournemouth; Miller, Francis T. W., London; Miller; Wm. P., Wandsworth; Millican, William, F., Leicester; Mills, W. E., A.A., Banbury; Milne, David, Cupar Fife; Milne, John, St. Andrews; Milne, William O., A., London; Mitchell, A. McGregor, Coatbridge; Moffat, William, Glasgow I.A., Hamilton; Molecey, Geo. T., F., Stamford; Monier-Williams, S. F., A. & A.A., London; Monro, James M., Glasgow; Monro, William Ch., London; Monson, Edw., jun., Acton; Montgomery, James, Treas. Liverpool A.S., Liverpool; Moore, Frederick H., A., Warwick; Moore, H. Wilkinson, A.A., Oxford; Moore, Richd. Wm., F.R.H.S. & Leeds A.S., Leeds; More, Geo., Stratford; Moreing, Charles, London; Morham, R., Edinburgh; Morris, T. Evelyn, Colchester; Morris, John, Bolton; Morry, Arthur, Manchester; Morton, A. C., London; Morton, George, Oldham; Morton, J. H., Northern A.S., South Shields; Muir, Edwin, M.I.C.E. & M.I.M.E., Manchester; Muirhead, T., Manchester; Muller, Charles M., Cheltenham; Mundy, Thos. E., A. & A.A., London; Munro, P., Bristol; Munroe, Alex., Thurso; Murdoch, John, Glasgow I.A., Ayr; Murgatroyd, J., F., Manchester; Murray, Albert E., F., Dublin; Murray, Robt. C., London; Murray, W. Day, Hastings; Myles, Andrew, Glasgow I.A., Glasgow.

Nash, Edwin, F., London; Nash, W. Hilton, A.A., London; Neill, J., & Son, Leeds A.A., Leeds; New & Son, A.A., London; Newman, J. T., London; Newman, Samuel J., A., Northampton; Nevill, Ralph, F. & F.S.A., Godalming; Neville, R., C.E., F.R.I.A.I., V.P. of C.E.I., Dublin; Newey, C. Isaac, Birmingham; Nicholl, S. J., A., London; Nicholson, Ralph, A., London; Nodal, Joseph, Manchester; Norman, Wm., Dorchester; North, C. N. McIntyre, London.

O'Brien, R. D., Limerick; O'Callaghan, J. T., F., Dublin; Ogden, George, Bradford; Ogle, Henry, A.A., Southsea; Ormrod, Thomas, Bolton-le-Moors; Osborn, Frank B., F., Birmingham; Osborn & Russell, London; Osborne, K. T., Leeds; O'Sullivan, Christopher, Cork; O'Sullivan, John J., Cork; Oswald, Joseph, Northern A.A., Newcastle; Oswald, Septimus, V.P. Northern A.A., Newcastle; Oswell, R. H., London; Owen, Charles, A.M.I.C.E., Dundee; Owen, Wm., A., Manchester; Owens, Richard, Liverpool.

Page, George Dean, Falkirk; Page, Richard C., A., London; Paice, Bowes A., A. & A.A., London; Paine, Edwd. J., London; Paraire, Edward L., London; Parken, Aug. H., F., Bournemouth; Parkinson, R., London; Parkinson, W. H., Leeds; Parsons, Henry, F., London; Parry, W. Kaye, M.A., Dublin; Patchett, F. List, Halifax; Paterson, Rob., Edinburgh; Patrick, Geo., A., London; Paul, John, Plymouth; Paul, Walter S., A., Bristol; Payne, Edward J., F., Birmingham; Peacock, Joseph, London; Peak, Henry, Guildford; Pearce, Edwin, London; Peniston, Henry, Salisbury; Penrose, F. C., F., & M.A., London; Penson, R. Strycke, F.S.A., Ludlow; Penstone, William, A.A., London; Percival, Harry, jun., Manchester; Percival, Harry T., Manchester; Perkin, Henry, Leeds; Perkin, W. J. Belton, Leeds; Perry, George, London; Perry, J. Tavenor, London; Perry, Thomas J., Birmingham; Pertwee, Charles, Chelmsford; Peter, Otho Bathurst, A., Launceston; Peterson, E. Pearson, F.S.A., Bradford; Petit, Henry, London; Petit, S. D. F., London; Petley, C. Carter, Ventor; Phelps, W., C.E., High Wycombe; Phipps, Charles J., F. & F.S.A., London; Phipson, A. B., F., Birmingham; Phipson, R. M., F. & F.S.A., Norwich; Phomason, Yeoville, F., Birmingham; Picknell, Robert, A.M.I.C.E., Hull; Picton, Wm. H., A., Liverpool; Pidding, George, Dalston; Pierpoint, Jno. & Son, Warrington; Pilleau, Fredk. S., A.A., London; Pinchbeck, Henry, Manchester; Pinches, Fred., A., London; Pink, Chas. Richard, A. & A.A., Winchester; Pinn, Charles, Exeter; Pither, Fran. L., A., London; Pocock, W. Willmet, F., Wandsworth; Pollard, Tom, Bradford; Pons, P., Manchester; Pope, Reginald, Folkestone; Pope, T. S., Bristol; Popplewell, Frank, Manchester A.A., Manchester; Porter, John M., Leeds A.A., Leeds; Porter, Thomas, F., London; Postlethwaite, William, Ulverston; Potter, W. J., A.A., London; Potts, Joseph, jun., Sunderland; Ponting, Chas. E., Marlborough; Powell, Evan, Inst. Surv., Llandiloes; Powell, Lewis, Hereford; Power, Edward, London; Pownall, John, Preston; Pownall, Robt. E., A. & V.P.A.A., London; Pratt, Hampden W., A.A., London; Preedy, Frederick, London; Price, Henry R., Manchester; Price, Peter, Cardiff; Pritchett, J. P., A., Darlington; Prosser, Thomas, F., Newcastle; Pryer, Geo., M.I.S.A., Wavenhoe; Prynne, G. H. Fellowes, London; Purday, C. H., A. & A.A., London; Pye, G. Gard, A., Colchester; Pyke, Baldwin, Ashford.

Quilter, John S., A.A., Ass. & Grad., London.

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Waddington, Thomas, Manchester; Wadling, H., A., London; Wadmore, James Forster, A., Tonbridge; Wailes, Fred. H., Easingwold; Waine, William, Croydon; Walker, David, Liverpool A.A., Liverpool; Walker, Henry, F., Leeds; Walker, Jas. Campbell, Edin, A. A., Edinburgh; Walker, Robert, A.M.I.C.E., Cork; Walker, T. H. P., Liverpool; Wallace, William, London; Waller, Fred. S., F., Gloucester; Walton, Charles, Darlaston; Walton, John W., A., London; Warburton, Richard, Urmston; Ward, Wm. H. M., Manch. A.A., Manchester; Ware, Charles Edward, M.I.C.E., Exeter; Waring, T., Cardiff; Waterhouse, Alfred, F., A.R.A. & A.A., London; Watson, Fothergill, Nottingham; Watson, T. E., Grantham; Watson, Thomas, Burnley; Watson, Thos. Henry, F. & A.A., London; Watson, T. L., I.A., Glasgow; Watson, Wm. James, C.E. & M.R.I.A.I., Warrenpoint; Watt, Robert, Belfast; Webb, Aston, A. & A.A., London; Webb, Edward, Exeter; Webb, Geo. W., A., Reading; Weeks & Hughes, Tunbridge Wells; Weir, James, A., London; Weller, John, Wolverhampton; West, J., Manchester; Wheeldon, F. & A., Birmingham; Wheeler, R., Tunbridge Wells; Wheeler, W., A., London; Whellock, R. P., A., London; Whitaker, J., Barnsley; White, H., Penzance; White, William, F. & A.A., London; Whitfield, R. O., London; Whitley, C. T., A. & A.A., Warrington; Wights, John R., M.A., Edinburgh; Wilcock, William, Bradford; Wilkinson, H., Oxford; Wilkinson, R. Stark, A. & Oxford A.A., London; Willey, Robert, A., London; Williams, Douglas J., Birmingham A.S., Birmingham; Williams, Thomas, A. & A.A., London; Williams R. Lloyd, A., Denbigh; Williams, W. F., A., Brighton; Willins, Edw. Preston, Norfolk & Norwich A.A.S., London; Willis, Thomas, W., A., London; Willoughby, Ch. Edwin, Leicester; Wills, John, Derby; Willson, T. J., London; Wilson, Fredk. Richard, F., Alnwick; Wilson, Joseph, Halifax; Wilson, Thomas H., Sheffield; Wimperis, John, Thos., F., London; Winder, F. A., Manchester; Winter, Edmund, Liverpool; Wise, Charles, Liverpool; Witherington, W. S., London; Withers, J. B. Mitchell, F., Sheffield; Withers, R. J., F. & A.A., London; Withers, William, Birmingham; Wonnacott, T., F. & Grad. R.I.B.A., Farnham; Wood, J. H. Bury; Wood, William H., A. & A.A., London; Woodard, John, London; Woodhouse, George, Bolton; Woodhouse John H., Manchester A.A., Manchester; Woodward, Wm., A., London; Wooler, W. H., Weston-super-Mare; Worth, Thomas, Crewe; Worthington, E. N., Manchester; Worthington, Thos., F. & Past Pres. Manchester S.A., Manchester; Worthington, Thos. P., Blackpool; Wray, Christopher G., F., London; Wright, Alfred, A.A., London; Wright, E., Gainsborough; Wright, Thomas, Nottingham; Wyard, Jabez Richard, London; Wyatt, Matt., F., London; Wyatt, Thomas Henry, F., F.S.A., & M.I.C.E., London; Wyborn, Stephen M., A.A., Windsor; Wykes, William, Birmingham.

Young, Arthur, A.A., London; Young, James, Bradford; Young, John, jun., K.S.G., London; Young, John, Perth; Young, John W., Manchester; Young, Julian, Derby; Young, Keith D., A. & A.A., London; Young & Meldrum, Dundee; Young, W., London.

Several names have been sent in since the memorial was presented.

The Hon. Sec. will be glad to receive donations from 1s. and upwards towards the expenses of the Memorial, which have exceeded by 25*l.* the amount already subscribed, for which deficit the Committee are responsible.

* See p. 662, *ante*.

THE EFFECT OF SULPHATES ON LIME MORTAR.*

IN the year 1870, the author commenced to experiment on the subject of the effect of sulphates on lime mortar, and finding himself at the beginning of 1879 unable to further pursue his investigations, he decided to submit a paper on the subject to the Institution of Civil Engineers with a view of enabling others to give the matter their consideration. It afforded him pleasure to find that that body appeared to appreciate his labours, inasmuch as it accepted the paper and set it up in type. However, as twelve months had elapsed and there was no appearance of the paper being read this session, the author determined to withdraw it, and by the kind courtesy of the Council of this Association he is enabled to bring it before the present meeting.

It was observed by Major, now Major-General, H. Y. D. Scott, C.B., Assoc. Inst. C.E., about twenty-five years ago, that the chemical combination of a small quantity of sulphurous acid gas with limes had the effect of causing them to set, after the manner of cements, without increase in bulk or any considerable elevation of temperature. The union of the gas with the lime was first effected by allowing sulphur fumes to pass into the kilns during the process of calcination; but more regular results have since been obtained by mixing either a soluble sulphate or sulphuric acid with the lime after it has been burnt. In ordinary mortar the lime, before being mixed with the sand, is brought to a state of fine division by slaking with water, that is chemically; whereas in General Scott's method mechanical appliances are resorted to in order to reduce the lime to powder, and water containing finely-ground plaster of Paris or other soluble or partially soluble sulphate is then added. When these have been reduced to a creamy paste, the sand is put in along with any further quantity of water necessary to render the mortar when mixed convenient and fit for use. Mortar thus prepared may be used even for plastering purposes shortly after being mixed, as the lime when treated in this manner shows no tendency to slake. The quantity of sulphate required to be added varies with the description of lime, and is much governed by the proportion of clay which it contains. Those limes in which only traces of alumina are found, such as the pure chalk limes, require about 7 per cent., whilst blue lias and other hydraulic limes require but 3 or 4 per cent., and with very clayey limes the amount of sulphate may be reduced to 2 per cent. of the bulk of the lime. The principle of General Scott's invention, now generally known as the selenitic process, is so to combine the lime with water that it shall not burst with the heat, and, in fact, to arrest the slaking of the lime so that the setting may take place without increase in its volume. By this means the strength of the mortar is increased, and it is rendered quick-setting, which is a very desirable property under many circumstances. In ordinary building operations, however, the mortar must not be too quick, or it may set before it can be got into the work. A strong but comparatively slow-setting mortar is often therefore to be preferred. The experimental results contained in this paper lead the author to believe that such can be procured by first thoroughly slaking the lime with water, then adding the sulphate to it in that state, and afterwards the sand, ashes, and pozzuolanas, or other ingredients, and mixing the whole in the usual manner. If this method be pursued, and four or five parts of sand be added to one part of slaked lime, a slow-setting mortar will be produced, possessing after having set for some time much greater strength than selenitic or Portland cement mortars containing a similarly large proportion of sand. The characteristics of this mortar are therefore entirely different from those of the latter compositions. It would appear that General Scott entirely directed his attention to the neutralisation of the slaking properties of quick lime, and not to the employment of a sulphate with slaked lime, as here proposed, in mixing ordinary mortar.

The adding of plaster of Paris to lime has frequently been said not to be a new process, inasmuch as it has been used by builders for an indefinite period both with and without lime for plastering purposes, in order to produce a fine quick-setting mortar. The proportion of plaster employed for this purpose, however, has always been much larger than that adopted by General Scott and proposed to be used by the author. The builder has hitherto mixed a large proportion of plaster with lime on account of its quick-setting properties as a material, and employed the resulting composition for rendering the interior of rooms and similar descriptions of work not exposed to wet or damp; and in such positions, were it not for the question of cost, many would prefer to use neat plaster of Paris. This mortar prepared with plaster of Paris if subjected to wet or damp would crack and disintegrate, whereas that which the author advocates is suitable for all situations in which it is customary to employ an ordinary mortar. The plaster of Paris, that is sulphate of lime, is added in small quantities because it is the most convenient and economical medium for supplying the requisite chemical constituents. The builder would deem plaster which has been once set as worthless; however it may be inferred that if this substance were re-ground it would answer in the processes which are now being considered nearly as well as fresh plaster of Paris.

In 1870 the author, then having charge of the testing of the various cements and mortars employed in the works in progress at the Liverpool Docks, availed himself of the facilities thus placed at his disposal, to test the effect of mixing sulphates with slaked lime. The results being somewhat extraordinary it has been thought advisable to bring them in detail before the Institution. The lime used in the experiments, unless otherwise pointed out, was Halkin lime, from Flintshire, in North Wales. The limestone from which this lime is derived contains about the same amount of silica and alumina as that from Barrow, and produces an hydraulic lime, which, however, is not equal to Warwickshire blue lias lime in setting or hydraulic properties. The proportions given in the accompanying tables are in all cases by volume; and where the quantity of any ingredient is represented by a fraction, such is of one part and not of the whole quantity of mortar. The quantity of plaster of Paris in all experiments with Halkin lime was a percentage of the quantity of slaked lime. The various descriptions of mortar tested were mixed in mills on the site of works in progress, and by men daily employed upon such duties; and every endeavour was made to insure that the experiments should be carried out under as nearly as possible similar conditions in each instance.

The first series of experiments was with briquettes having a sectional area of 2½ square inches, such as usually made for testing Portland cement. These were drawn asunder by means of a Michele lever cement-testing machine. [The results and all particulars were given in tables.] . . . . It remained to be seen how the addition of plaster of Paris would affect mortar intended to be set under water. Experiments tended to prove that the ultimate strength of the ordinary Halkin mortar was not impaired by immersion in water, but that the strength of the mortar containing a small percentage of plaster was materially reduced. It would appear from these experiments that by adding plaster of Paris to slaked lime the strength of the mortar will be increased and the cost reduced, consequent on the larger proportion of sand which may be employed; and it may be inferred that experience will demonstrate the advisability of employing plaster of Paris in mortar to be used in ordinary building operations, but that it will not be found advisable to add it to slaked-lime mortars intended for hydraulic purposes.

The author does not wish it to be understood that he considers any description of lime-mortar can equal in strength or setting properties neat Portland cement, or Portland cement mortar, in which a small proportion of sand is used. However, when a large admixture of sand is made slaked-lime mortar prepared with plaster appears to be decidedly stronger than Portland-cement mortar containing a similarly large proportion of sand. Even ordinary Halkin-lime mortar, when mixed in the proportions of 2½ to 1, at the age of six months, is about equal in strength to Portland-cement mortar mixed in the proportions of 4 to 1.

It may, on the whole, be taken for granted that mortar composed of four or five parts of sand to one part of slaked lime can be made possessing greater strength than Portland-cement mortar mixed in similar proportions. The economy to be effected is evident when it is considered that the normal price of Portland cement is not less than 2s. per bushel, whilst a bushel of slaked lime does not cost one-third of that amount.

The broken portions of the briquettes with which the first series of experiments was made have been exposed to the weather since 1871; those mixed in the proportions of five parts of sand to one part of slaked lime give evidence of being sound material, and of having stood equally well as those mixed without plaster in the proportions of 1 to 2½.

In making mortar the proportions of sand, ashes, and other ingredients which ought to be adopted, depend entirely upon the nature of the lime; for instance, no engineer would put as much sand with blue lias as with grey-stone lime. In the process now proposed similar laws will hold good, but, as a general rule, double the quantity of sand may be used when plaster is added, that would be considered proper with any particular lime under ordinary circumstances.

In conclusion, it may be stated that nearly 800 experiments with bricks and briquettes, carried out in various manners, tend to endorse the general results accompanying this communication and the opinions advanced, which are briefly: that the ultimate strength of all lime mortars will be much increased by the addition of a small percentage of plaster of Paris, and that, when mixed in the manner described, they will apparently at first possess similar properties to ordinary mortar made with the same kind of lime in the manner as at present practised.

* From a paper by Mr. Graham Smith, C.E., read at the annual meeting of the Association of Municipal and Sanitary Engineers and Surveyors, held at Leeds on May, 27th, 28th, and 29th.

STATISTICS OF PUBLIC WORKS IN LEEDS.

ASSOCIATION OF MUNICIPAL AND SANITARY ENGINEERS AND SURVEYORS.

THE annual meeting of this association was held in Leeds on the 27th, 28th, and 29th ult. On the first day the president, Mr. A. W. Morant, borough engineer of Leeds, delivered an inaugural address, in the course of which he said that the borough of Leeds comprises an area of nearly 22,000 acres, and is divided into eleven townships, and contains parts of two hamlets adjoining. The population is now estimated by the Registrar-General to be about 320,000, and the rateable value is 1,096,020*l.*

Sewerage.—Leeds is well sewered, with the exception of parts of the outlying districts, which are being rapidly completed. During last year 17 miles of sewers of various sizes were constructed, and the total length of sewers within the borough is now about 187 miles. Up to the end of August, 1879, the total amount spent in sewerage and in the outfall works at Knostrop has been 436,000*l.* The railways, river, and canals have to be crossed several times, sometimes by iron tubes in line with the sewers, and sometimes depressed as inverted syphons. It occurred to me (said Mr. Morant) to make a trial of Priestman's self-acting bucket for the purpose of clearing the deposit from the settling-tanks, which in some cases are about 30 ft. in depth and nearly 20 ft. in water. The bucket consists of two quadrant-shaped vessels hinged together at the upper edge; it is lowered open, fills itself in the act of closing, and holds the mud securely whilst it is being drawn up through the water. It answers its purpose very well, and obviates the necessity of pumping out the water from the tanks and sending men down. All the sewers are freely ventilated by means of open gratings, or by the gullies, which are constructed to act as ventilators. The system has now been in use for nearly seven years, and is found quite satisfactory. At present we have about 20,000 gullies acting as ventilators. It is, of course, the very large number of openings which prevent any nuisance from the escaping gases. In sewering new districts the old drains and watercourses are, when possible, reserved for the purpose of carrying away the surface drainage. The size of the main sewer at its outfall is 8 ft. by 7 ft. 9 in. The sewer terminates at the sewage works at Knostrop. The site of these works is rather low, and in times of flood in the river the water backs up and causes much inconvenience. Negotiations are now in hand with the Aire and Calder Navigation Company for the removal of a dam across the river one and three-quarter miles below the works, by which an additional fall of about 4 ft. will be obtained, and the effluent have a much freer discharge. At the present time the sewage of about 287,000 of the inhabitants of the borough reaches the works. From recent

carefully-taken gaugings, the average daily quantity in dry weather is found to be about ten millions of gallons. Lime burnt from carboniferous limestone, and which is obtained from Skipton, is at present alone used for the clarification of the sewage, and is found to produce an effluent sufficiently good to satisfy the requirements of the injunction obtained in 1870. I may mention that about one ton of lime is used to every million of gallons. The total expenditure of these works during last year, including pumping the sewage, was 5,848*l*. The sludge is of course here, as everywhere else, the great trouble. Extensive drying apparatus was erected, but hitherto no remunerative return has been obtained, so that of late it has not been used. We have, however, a large area of spare ground, and can go on for some time.

Sanitary.—The Sanitary Department consists of the medical officer of health, borough analyst, a superintendent, and chief inspector of nuisances, three clerks, ten sub-inspectors of nuisances, four disinfecting men, whose duty is to disinfect all clothing, bedding, &c., and fumigate infected houses; they have two horses and vans for removing the bedding, &c., to and from the disinfecting apparatus; two meat inspectors, one dairy and cow-shed inspector, one inspector of lodging-houses and canal-boats. There is a public mortuary, containing morgue, disinfecting-room, two rooms for receiving the dead bodies of persons brought from crowded dwellings and awaiting burial or who have died of infectious disease, inquest-room, &c. The cleansing of the town is performed by a staff of about 100 scavengers employed by the corporation, aided by thirty-two horses and carts; they sweep the paved streets and markets, and empty the gullies, the macadamised roads being cleansed by the Highways Department. For watering the streets twenty-eight water-barrels and carts are employed, and with the cost of the water used, an expenditure of about 1,750*l*. a year is incurred. The night-soil department is, as everywhere else, a source of heavy expense, the contract for emptying bins and removing the night-soil and refuse being at the rate of about 12,333*l*. per annum. There are in the borough about 40,000 privies, 15,000 dry ashpits, 3,000 box-closets, 12,000 ordinary water-closets, and 1,720 trough water-closets, used by 4,945 tenants. These trough-closets are a great improvement upon the common privy; they should be attended to, if possible, daily. In Leeds sixteen men are employed to cleanse them and to refill the troughs with water. Our district secretary (Mr. B. C. Cross, of Dewsbury) has taken out a patent for an improved method of emptying the trough by means of a syphon, with a self-acting arrangement. This will obviate the necessity of such frequent attention. Many of you will have experienced the great difficulty of finding suitable tips within a reasonable distance where refuse could be deposited without causing a nuisance, and for some time Leeds has suffered in this respect. The introduction of Fryer's Patent Destructor has, however, removed the difficulty, and we are now enabled to dispose of all refuse without nuisance, and to considerably reduce the distance, and consequent cost of cartage. After fully describing the arrangement and construction of the apparatus, Mr. Morant added:—During the year 1879 the following quantities of materials were consumed in the destructor:—14,000 tons of rubbish, 59 beds, 131 mattresses, 264 carcasses of pigs which had suffered from swine fever, 1 cow, 8 sheep, 2 lambs, 28 quarters of bad meat, and 13 cwt. of bad meat. Since the Burmantofts destructor was started, two years and a half ago, 30,041 tons of refuse have been consumed by it. (This is taken to the 31st of April last.) For each depôt the following men are required:—One foreman, who also acts as engine-driver; four furnacemen; one labourer, who attends to two mortar-mills, and the same for night duty. The carboniser is used to convert the refuse obtained from the sweepings of the paved streets and the markets, and other vegetable refuse, into a carbon, very useful as a manure and deodoriser, and which finds a sale at 30*s*. per ton. The total cost of the sanitary department in the year ending the 31st of August, 1879, was 34,125*l*.

New Buildings.—We have stringent building bye-laws, which are rigorously enforced under the direction of a building inspector, four sub-inspectors, and two clerks. The inspectors examine all foundations, see all sewer connexions and drains before they are covered up, and that the buildings are in every respect carried out in accordance with the drawings passed and stamped by the Building Clauses Committee, and of which tracings are deposited; and no dwelling-house can be occupied until the inspector has certified that all is correct. About seventy sets of plans are disposed of at each fortnightly meeting.

Highways.—The length of paved streets within the borough is 107 miles, and of macadamised roads 132 miles, making a total of 239 miles. The whole of the stone for the repair of the macadamised roads is brought from the Corporation quarries at Great Ayton, nine miles from Middlesbrough, and sixty-eight miles from Leeds, and in addition about 4,000 tons of dross are used in the neighbourhood of the furnaces. The stone is quarried from a Whinstone dike, about 70 ft. in breadth, enclosed in shales of the lias formation. Last year 11,823 tons of rough stone, 13,561 tons of machine broken, 1,479 tons of hand-broken stone, and 1,245 tons of paving setts, were brought into the town from the quarry for use, in all 28,108 tons, and during the same period 3,500 tons of Whinstone sets, 1,460 tons of granite sets, 1,840 tons of Bradford paving-stones, 2,815 super. yards of sets, 7,000 yards of flagstone, and 1,328 lineal yards of kerbstone, were purchased. In the borough 240 men are employed upon the roads in repairing and cleansing, and 20 horses and carts, besides those leading stone, which are paid by contract. There are a few streets paved with wood, originally laid down by the Improved Wood Paving Company, upon a foundation composed of two layers of inch boards, one laid transversely and the other longitudinally; but the plan did not answer, and the blocks are now laid upon a foundation of concrete. The price is at present about 12*s*. per yard. There is not any asphalte paving in Leeds. The cost of the highways department for the year ending 31st of August, 1879, was 51,400*l*. The streets and roads are lighted by about 7,000 lamps, at a cost of about 2*l*. 7*s*. per lamp. Each burns about 3½ cubic feet per hour.

Water.—Leeds possesses an abundant supply of good wholesome water. The present consumption is at the rate of about 7,000,000 of gallons per day, of which nearly 2,000,000 are supplied for trade purposes, and the remaining 5,000,000 consumed for domestic purposes. The works belong to the Corporation, and are of the most substantial nature, no expense having been spared to make them efficient and durable in every way. The source whence this water is procured is the river Washburn, a tributory of the Wharfe; and the point where the water is first impounded is about fifteen miles from the Town Hall, measured in a straight line. In the valley are three large reservoirs for the storage of water for the town's use, and compensation for the mills. The drainage area from which these reservoirs are fed is about 23,000 acres, and the average rainfall is here about 36 in. per annum. The most distant reservoir, known as Fewston Reservoir, has an area of water surface of 156 acres, and a capacity of 866 millions of gallons. . . . The total cost of the waterworks up to the end of the last financial year has been 1,343,634*l*., but in spite of this the Corporation is able to give a constant supply of water at very moderate rates; for instance, a house the rental of which does not exceed 20*l*. per annum is charged at the rate of 1*s*. in the pound, and one not exceeding 50*l*. 2*l*. per annum. Water is supplied for trade purposes by meter at the rate of 6*d*. per thousand gallons. Mr. Hawksley has, in speaking of this price, remarked that, so charged, water is by far the cheapest commodity supplied to us, it being collected, filtered, brought fifteen miles, and delivered into our houses for three-halfpence a ton. At the end of August last 72,026 houses were supplied, and 11,522 water-closets.

Gas.—The gas undertaking of the Leeds Corporation was purchased from two competing companies in 1870, the price paid being 40 per cent. premium upon the stock and share capital of the companies, the total cost to the Corporation being in round numbers 800,000*l*. Since the transfer there has been a further expenditure of about 150,000*l*., the capital expenditure at the present time being 950,000*l*. In 1870 the gas manufactured was 850 millions of cubic feet, and the sale 650 millions, the loss (including gas consumed upon the works) being 200 millions per annum. In the year ending June, 1879, the gas made amounted to 1,250 millions, and the sale to 1,063 millions, the loss (including use on premises) being 187 millions. The prices charged for gas have been as follow:—1870 to 1874, 3*s*. 6*d*.; 1875 and 1876, 3*s*. 9*d*.; 1877, 3*s*. 3*d*.; 1878, 2*s*. 9*d*.; 1879, 2*s*. 6*d*.; 1880, 2*s*. 2*d*. The quality of the gas supplied, when tested by the London standard burner, is equal to an average of 18¼ candles. The length of mains is upwards of 500 miles, the area of lighting covering 35 square miles. The number of meters fixed is 68,777, of which about 85 per cent. are two-lights and three-lights.

Although the expenditure upon works affecting the health of the town has been enormous, already amounting to about 1,829,000*l*. (not including the cost of paving and flagging new streets done by the owners), it is satisfactory to find that the money has not been expended in vain, for during the last ten years the death-rate has considerably decreased. In 1870, it was 28·2 per 1,000; 1871, 26·1; 1872, 28·0; 1873, 27·2; 1874, 28·5; 1875, 27·5; 1876, 25·0; 1877, 22·2; 1878, 23·7; and 1879, 22·3.

THE GRAND HOTEL, CHARING-CROSS.

VISITORS to the new Grand Hotel at Charing-cross last Saturday morning found it a veritable hive of industry, busy bees in the shape of workmen thickly abounding everywhere. Gilders and decorators, painters and parquet workers, carpenters and marble-masons, upholsterers and carpet-planners,—to name only some of the craftsmen and workwomen,—were at work all over the building, putting here and there a finishing touch, and reducing chaos into order. The confusion was apparently inextricable; one set of workmen appeared to be in the way of another set, and at one time it seemed unlikely that all that had to be done could be done in readiness for the formal "inauguration" which was to take place in the evening. As time wore on, however, the results of persevering and patient labour became more and more manifest. Ladders and steps were got out of the way, and a number of choice exotics brought in to line the grand vestibule and staircase, the foliage coming in pleasant contrast with the marble background afforded by columns and walls. The "inauguration" was honoured by the presence of the Lord Mayor of London, who, in his speech, declared that his visit left in his mind no doubt that in countenancing in his municipal character this particular instance of commercial speculation and private enterprise he was only discharging a public duty. If he was advancing the interests of any individual or any number of individuals, he was, in a greater degree, advancing the interests of the community. There was no doubt the company were now, if not on classic, on historic ground, for here at a very early date pilgrims used to be entertained and taken care of at the old hospital of St. Mary Roncesvaux (or Rouncival). Having referred to the historic events which had occurred within view of the hotel—the passage of the body of Queen Eleanor to the abbey, and the execution of Charles I., and to the allegation that the building which the hotel has replaced was put up from bribes received from the King of Spain by the courtiers of James I.—he came down to modern times by the statement that the site of the hotel was worth 300,000*l*., and that more than 100,000*l*. had been expended on the building. He characterised the enterprise as a praiseworthy effort to supply in a manner worthy of the metropolis a recognised deficiency in its hotel accommodation, and congratulated both the proprietors (Mr. F. Gordon and colleagues) and the architects (Messrs. F. & H. Francis and Mr. J. E. Saunders) on the successful completion of the work. He had nothing to add, except to say to the proprietary, "Throw wide your portals to us"; and to the nations of the world, "Come hither, the Grand Hotel is open."

In the volume of the *Builder* for last year will be found (p. 344) a view of the exterior of the building, the successful treatment of which, architecturally, has been somewhat interfered with by the awkward contour of the site, and by the necessity (owing to the heavy ground-rent,—9,500*l*. per annum, or, roughly speaking, 9*s*. 6*d*. per foot super.) of utilising every available inch of ground. As our readers know, the Grand Hotel stands partly on the site formerly occupied by Northumberland House, which was built by Henry Howard, Earl of Northampton, son of the famous Henry Howard, Earl of Surrey, the poet. The Percys came into possession of the house by a marriage with the daughter of the Earl of Suffolk, who was Northampton's nephew, and during whose possession it was called Suffolk House. The edi-

fice originally consisted of three sides of a spacious quadrangle, the fourth facing the Thames, having been left open. Jansen is said to have been the architect, but the quaint front next the Strand was designed by Gerard Christmas, whose monogram was repeated in the ornamental screen. Only this central division and gateway remained after the destruction of the Strand front by fire in 1780, the ruined portions having been rebuilt.

We last year * gave a tolerably full description of the structural features of the hotel on the occasion of the visit of the Architectural Association, and these particulars were supplemented by some further details at the time we published our view of the building. We may take occasion to say here, however, that perhaps the most noteworthy feature in construction is the grand staircase, which, at first intended to be in Portland stone, has, at the suggestion of Mr. G. H. Holloway, the able and courteous clerk of the works, been constructed so as to be fireproof. Each step is of concrete made of Portland cement and burnt breeze, having embedded in it for its whole length a rolled iron joist 5 in. by 2 in. by ½ in., the treads and risers being faced with white Sicilian marble. Each step is capable of bearing a weight equal to 2 cwt. per square foot. While speaking of the grand staircase we may make mention of three stained-glass windows on the flight going up to the first floor. These windows (which are stepped to follow the rake of the stairs) have been executed by Mr. Alexander Gibbs, and illustrate historical incidents connected with the former owners of the site. The uppermost window represents William de Percy, surnamed Alsgernons, obtaining from William the Conqueror the forfeited estates of Cospatrick, the Saxon Earl of Northumberland. The middle window illustrates the following lines from the ballad of "Chevy Chase":—

> "Persè leneth on his brande,
> And saw the Dowglas dee;
> He toke the dede man by the hand,
> And sayd 'Wo ys me for thee.'"

The lowermost window depicts Henry, ninth earl of Northumberland, called "The Wizard," and Sir Walter Raleigh, with their three learned friends known as "The Three Magi," studying the sciences whilst prisoners in the Tower of London, 1603. One other point worthy of special mention is the ventilation of the grand and secondary *salles*. Fresh air for the grand *salle* is brought into that apartment through gratings inserted in the angular spaces at the junction of the columns with their pedestals, at a height of between 4 ft. and 5 ft., the air being conducted to the bases of the columns by means of iron tubes passing beneath the floors of the shops which form the ground-story of the hotel on the Strand frontage, the tubes terminating beneath the stall-boards of the shops by means of gratings. This arrangement is due to Mr. Holloway.

The architects, as before mentioned, are Messrs. F. & H. Francis and Mr. J. Ebenezer Saunders, F.S.A. The general contractors for the erection of the building were Messrs. Merritt & Ashby, whose general foreman was Mr. E. Coates. The whole of the marble work of the hotel (including vestibule and grand staircase), and the mosaic pavements of hall and passages, has been executed by Messrs. Burke & Co., of Newman-street. The entire furnishing and upholstery of the hotel, and the decoration of the ladies' drawing-room, library, and other principal apartments; also portions of wall-decoration in Walton's patent "Linoleum Muralis" (the "Sunbury Wall Decoration"), has been done by Messrs. Maple & Co., of Tottenham-court-road. The stone and wood-carving in the external and internal decorations, and the entire carved work and decorations of the reception-room on the right of the vestibule, are by Messrs. Anstey & Co., Alpha-road, Regent's Park. The decoration and gilding of the hall, vestibule, and grand and secondary *Salles*, and the entire decoration and ornament of the grand buffet, are the work of Messrs. Campbell & Smith, of Southampton-row. Messrs. Bellman & Ivy, of Wigmore-street, supplied the scagliola work. The stained-glass in the grand *Salle*, library-screen, window at end of corridor, and in windows of smoking-room and luncheon-buffet, is by Mr. A. L. Moore, of Southampton-row. The stained-glass windows on the grand staircase are by Mr. Alexander Gibbs, of Bloomsbury-street. Messrs. Parsons & Co., of Gray's Inn-lane, did the *carton pierre* and plaster work; and Messrs. Simpson & Co., of St. Martin's-lane, the ornamental tile-work. Messrs. Sanson Bros., Mansfield, supplied the ornamental iron balustrade of the grand staircase. Mr. John Essex, of Trinity-square, Southwark, executed the ornamentation of smoking-room, and the wall paper-hangings throughout. Messrs. B. Verity & Son, of King-street, Covent-garden, supplied the gas-fittings in the grand and secondary *Salles*,—the burners of which, by the way, are all connected by a fine platinum wire, and are instantaneously and simultaneously lighted by means of electricity. Messrs. Strode & Co., of Cockspur-street, supplied the sunburner in reception-room, and the gas-fittings in luncheon-buffet and grill-room; Messrs. Greene & Sons of Cannon-street, supplied the external lamps and the gas-fittings in reception-room and smoking-room. Messrs. Hulett & Co., of High Holborn, provided the gas-fitting for entrance-hall, corridors, ladies' drawing-room, and lobby; Mr. Sugg, of Westminster, supplied some of his patent "Christiania" and "London" gas-burners and regulators; the stoves were supplied by Messrs. Yates, Haywood, & Co., of Thames-street, and Messrs. H. Lowman Taylor & Co., of Queen-street; Messrs. Benham & Sons, of Wigmore-street, provided and fixed the ranges, cooking-stoves, and fittings of kitchens and pantries. Messrs. Adams & Co., of the Haymarket, fitted up the electric bells, and Mr. G. Paterson the electric gas communication in the grand *Salle*. Messrs. Dennett & Co., of Whitehall, did the fireproof flooring, and Messrs. Braby & Co., Fitzroy Works, Euston-road, the ornamental and other external zinc work of the roof, &c., and the zinc apparatus used in the ventilation of the hotel. Messrs. Hobbs, Hart, & Co., of Cheapside, provided the strong rooms, safes, locks, and fastenings; Mr. George Jennings, of Palace-wharf, Lambeth, the sanitary appliances, baths, bath-room fittings, watercloseets, urinals, lavatories, &c. Messrs. Waygood & Co., of Falmouth-road, fitted up the patent safety-lift for visitors, with security against accident,—luggage and service lifts, &c.; Messrs. Burrow & Co., of Mark-lane-square and Malvern; provided the fittings and appliances of wine-cellars and buffet; Messrs. Shand, Mason, & Co. have provided and fixed the fire-mains and hydrants; Messrs. Charles Williams & Co., constructed the ornamental iron roof over the grand *Salle*; and the building has been completely dried throughout by Messrs. Dreyfus & Co., of Monkwell-street, with Ligoy's patent process. The whole of the graining has been done by Mr. Osmand, of Grosvenor-street, Islington. In all there are about 12,000 yards.

The hotel was opened for business on Tuesday last, and applicants for rooms were turned away at night! How visitors to London were accommodated before the erection of the large hotels and dining-halls which have been set up within the last few years it is difficult to understand. As to the total cost of the building and furnishing, exclusive of the land, we shall not be far out if we call it nearly 200,000*l*. The shops, some of which are let at 500*l*. per annum for the first year, and 600*l*. per annum after wards, are expected to pay the bulk of the ground-rent. We willingly add, after personal inspection, that the hotel is replete with conveniences, and is most handsomely and tastefully decorated and furnished. The architects deserve commendation, and they have evidently been well served by their clerk of the works.

* *Builder*, 1879, p. 136.

"The Doctor in the Kitchen."—This was the title of the fourth and last of the drawing-room lectures, under the auspices of the National Health Society, given at the house of Mr. C. Matthews, Hertford-street, Mayfair. The lecturer was Mr. Ernest Hart, who presented to a large audience many facts regarding food, and a number of suggestions respecting its preparation. The subject of waste in the kitchen was noticed, particular attention being drawn to the great amount of nutrition to be derived from what are too often regarded as waste substances. The lecturer dwelt particularly on the extravagance of roasting, and urged that by the use of the ventilated closed stove, there would not only be a great saving in the food, but that the quantity of fuel saved would be enormous. The lecture concluded with suggestions whereby the *menu* of a dinner might be varied each day in each season of the year. Thanks were given to the lecturer and to Mr. Matthews for the use of the house.

THE ROMAN WALLS OF CANTERBURY.

SIR,—I have read, I may say studied, Mr. Pilbrow's paper in the "Archæologia"; and I have referred, in the recently-printed part of my "Collectanea Antiqua," to the subject of his letter to you. I intended to render him nothing but grateful acknowledgments for what he noticed and recorded during his professional superintendence of excavations made for public, not for archæological purposes, some years since. I did not intend, in any way, to disprove what he found; but I attempted to advance towards proving what circumstances did not permit him to discover.

Mr. Pilbrow's excavations were pretty much confined to the centre and interior parts of the city; and, I think, did not penetrate the boundary line, which, I believe, is the line of the Roman town. He found in the limited space intersected the remains of substantial walls; and of buildings of importance which must have been of a public character. Similar remains, as you well know, sir, were brought to momentary light in London; and they have been noticed, under like circumstances, in numerous other towns of Roman origin, the walls of which are yet to be traced far beyond, inclosing a much wider extent of ground.

If we were to confine the Cantian metropolis to the small space indicated by the remains discovered by Mr. Pilbrow, Durovernum would be an exception to the space allotted to London, Colchester, Saint Alban's (Verulamium), Winchester, Chichester, York, and indeed to all Roman capitals or chief towns. In some of these the Roman walls are so destroyed, or concealed by Mediæval reparations, that it is almost impossible to point, above ground, to pure Roman masonry. Chichester presents a remarkable and interesting instance, to which I have already alluded; but more recent researches decide that considerable remains of Roman work are yet to be seen, although entirely concealed from the public eye by houses and other buildings. Yet the greater extent of the walls of Chichester, like those of Canterbury, shows nothing of Roman work; the promenades upon the walls suggest it; but the original facing stones have, in early times, been entirely removed, and Mediæval and modern substitutions supply their place. Yet slight excavations made at the base disclose their original character; as, I believe, they would do at Canterbury. The drawings of Stukeley and others (in my opinion at least), confirm the soundness of this view.

I hope that before Mr. John Brent publishes the new edition of his "Canterbury in the Olden Time," the Corporation may think fit to permit him to make excavations which would at once settle the question between us. Two or three large congresses have been held in this noble old town, and at each the Corporation professed to have archæological tendencies. Let these civic rulers now shew that they were in earnest in their assertions.

C. ROACH SMITH.

THE "SUNDAY SOCIETY" AND SOCIETY ON SUNDAY.

SIR,—You did me the honour of inserting in your journal of September 20, 1879, an article on "Sunday Recreations," and it was with no little pleasure that I heard the various discourses of the many eminent and energetic men who spoke on Saturday last at the annual meeting of the Sunday Society, held at the Freemasons' Tavern. The president was Lord Dunraven, who, in a very able and witty speech, touched on what had already been done in furtherance of this plan for providing innocent and harmless recreation for the masses for some hours on the Sunday. Mr. J. Comyns Carr (director of the Grosvenor Gallery), who spoke so well that we found his speech all too short, went farther, and said he thought it would also be a boon to men of a superior grade of society,—clerks, professional men, and others,—whose time in the week-days was fully occupied, that after divine service on Sundays they should have the chance of spending an hour amid art-treasures they would be able to fully appreciate and to enjoy. I think, also, in the paper read by Professor Plumptre and written by Professor Seely, of Cambridge, it was said that "Art and Science walk hand in hand with Religion"; and nothing can be truer; they are, indeed, the alabaster lamp that contains the sacred light. After a study of wonders dating from the creation of the world it seems as if the most debased natures

would return with less alacrity to the lower life they have been leading. It cannot be too much insisted on that the desire is not to drive people from, but to entice them to, the keeping of the Sabbath-day "holy" in the sense of harmless happiness and sinless pleasures, and the observance of the thanksgiving due to the Creator. Lord Dunraven justly remarked "that a species of gloom had been thrown over the national temperament that had taken its rise from an ultra-puritan spirit," and which had largely contributed to driving people to that most deadly, most debasing of all vices—intemperance,—"an evil that is like a canker spot on the prosperity, the happiness of this favoured land, and which it behoves the Government in the first place, and every patriotic Englishman and woman, to combat and to conquer with every means in their power." Lord Powerscourt, in an able speech, came at once to what has been thought a difficult side of the question—the *employés* being kept at work on Sunday. He said that the *employés* of the National Gallery in Dublin, after being told off from their work, asked of their own accord to come back for that day, liking their extra pay, and the half-holiday which is awarded them on Monday; and said truly, "it would be a graceful act on the part of the trustees of the British Museum to exercise their prerogative (as the Society do not mean to press their project on Parliament this session), and to throw open the Museum to the people." How many a poor fellow of better class socially, though not so well off as the artisan, might find thus mental pleasure during the dull inclement days of our English winters, perhaps ever, draw inspiration, obtaining knowledge that may become a weapon with which to open for himself a pathway to better and more prosperous days.

But there is another thing that I would urge on some of the able men who have taken this cause in hand, and who are all-powerful to do as they like on their own ground. Many of our influential men have houses that are in themselves palaces, and that inclose treasures of art in sculpture, painting, mosaics, china,—marvels almost beyond the imagination,—the paintings especially being not only the *chefs-d'œuvre* of ancient masters, but the gems of our living artists; and the mass of the English people have either never seen them at all, or after a cursory glance at a Royal Academy Exhibition, never see them again. To the happy possessors of these treasures I would suggest that each in turn, on some few Sundays of the year, should allow the public to visit his galleries; and, Quixotic as it may seem, I would urge, as I have urged before, that some of these gentlemen themselves now and then lecture or amuse the class they talk so much about. It would bring caste nearer caste,—would show more clearly to the man more lowly born what years it must take, what severe course of education, what contact with the world, what command of self, what tact, is required to make a perfect gentleman even of him who is "to the manner born." It would be seen that the working-class (a word most misapplied, as Lord Powerscourt remarked, when applied only to one set) does not consist of manual labourers only, for there are no harder working classes than the men to whom the destinies of England are confided, be the Government what it may. So with the doctor, the scientific man, the clergyman, and literary men. And when closer contact has brought this home to the people, it will form a bond between gentle and simple, peer and peasant, that shall blend them into one harmonious whole in the great pyramid of society.

One remark Lord Powerscourt made I would especially, sir, bring under your notice, as you have ever been an ardent forwarder of the spread of art. He alluded to Sir John Soane's Museum, and said, "How few people visited it or were aware of the treasures it contained, notably, Hogarth's best pictures, the 'Rake's Progress,' and two others, which he should like to see side by side in the National Gallery with the 'Marriage à la Mode.'" This hint should not be lost on the trustees.

An observation by Lord Dunraven, already quoted, reminds me of what is called "The Book of Sports," a proclamation from Charles I., reciting a former proclamation by King James, his father, permitting his subjects to have their accustomed *lawful* recreation on Sundays and holidays, which the Precisians and Puritans of the day were then endeavouring to suppress. The great change that our national manners have undergone since the period of the Reformation is scarcely in anything more apparent than in our present mode of keeping the Sabbath; and it will excite surprise in many to be made acquainted with the sports formerly prescribed, even by our Protestant kings, to be exercised on that day. The motives for this are stated in the proclamation:—

"By the King,

Our dear father, of blessed memory, in his return from Scotland, coming through Lancashire found that his subjects were debarred from lawful recreations upon Sundays, after evening prayers ended and upon holy days, and he prudently considered that if these times were taken from them, the meaner sort, who labour hard all the week, should have no recreations at all to refresh their spirits. And after his return he further saw that his loyal subjects in all other parts of his kingdom did suffer in the same kind, though perhaps not in the same degree, and did therefore, in his princely wisdom, publish a *declaration* to all his loving subjects, concerning *lawful sports* to be used at such times, which was printed and published by his royal commandment in the year 1618, in the tenour which hereafter followeth."

Here follows the proclamation, too long for you to print, and then Charles I. adds,—

"Now, out of a like pious care for the service of God and for the suppressing of any humours that oppose truth, and for the ease, comfort, and recreation of our well-deserving people, we doe ratifie and publish this our blessed father's declaration. . . . . And we further will that publication of this our command be made by order from the bishops through all our parish churches of their several dioceses respectively."

C. S.

AN AGE OF STATUES.

AT the present moment there are subscriptions open, more or less throughout France, the proceeds of which will be devoted to the erection of monuments in honour of great Frenchmen. The erection of statues has become a perfect mania in France; and where there there is no question of a pedestal and a statue on a public square or place, general enthusiasm is roused respecting the "monumental marbles" that deck the last resting-places of nature's elect. We have heard of a statue of Georges Sand at Nohant, and later on at the Luxembourg; of a statue of Alexandre Dumas in the Avenue de Villiers; of a statue of Rabelais in Touraine; of a statue of Alfred de Musset in Paris; of a statue of Thiers in Marseilles; of a statue of Lakanal in the Ariège; of a statue of Colonel Denfert-Rochereau at Saint-Maixent (Sarthe); and we have also heard of gorgeous monuments, —sometimes raised above the graves of the persons honoured,—in commemoration of Michelet, the historian; of Rouget de Lisle, at Choisey-le-Roi; of Diderot, at Langres; of Couture, in Père-la-Chaise Cemetery; of the Countess d'Agoult (known as Daniel Stern), also in Père-la-Chaise. And now comes the year when the long-talked of statue of Béranger should be inaugurated in honour of the centenary of the poet's birth! A committee was formed some time ago, consisting of political, literary, poetical, and even musical celebrities, who were anxious to do honour to the centenary in some striking manner. It was thought that the best mode of implanting the poet of the people, as he is often called, firmly in the minds of the present generation was the erection of a statue to his honour in their midst. The State promised to supply the marble for the statue, the design for which was, of course, to be put up to public competition. All this, however, requires money, and up to the present time the subscriptions for Béranger's statue have reached but a small figure in spite of the overwhelming efforts of choral societies, and various bands of enthusiasts. Béranger is treated with contempt, it is said, by French men of letters, and only a few among them will come forward to support him. He is essentially a man of the people, and his popularity has always been, and is still, chiefly among the people. It is said that, after Waterloo, the English soldiers found in the coat-pockets of almost all the dead French soldiers a little song-book containing numbers of Béranger's verses; and that an English general attributed to the national gaiety and love of music the sobriety and the gallantry of behaviour of the French troops.

The committee have organised, says the *Temps*, in aid of the funds of the association for the raising of a statue, a performance which has just taken place, at which M. Spuller delivered a lecture on the "Life and Works of the Poet," showing that Béranger was not, as has been often declared, a Bonapartist in disguise, and describing with graphic power the style of Béranger's life and surroundings. What would Béranger have said could he have known that he would have a statue! He did not even aspire to a tombstone, and he it was who sang gaily enough,—

"Avec le prix ou du marbre ou du cuivre,
Pour un gueux mort habit cent fois trop beau
Faites achat d'un vin qui pousse à vivre;
Buvons gaiment l'argent de mon tombeau."

But Béranger will have his statue all the same, eventually, just as Alfred de Musset will have his; though De Musset, like Béranger, asked neither for tombstone nor statue. He said,—

"Mes amis, quand je mourrai,
Plantez un saule au cimetière.

The willow has been planted, but its drooping branches hang about a handsome monument surmounted by a fine bust of the poet.

It is generally said that we invariably follow in French footsteps in matters of art; perhaps we are coming, therefore, upon an era of statue-erection, of which the promised statue of Byron is the first symptom. Perhaps, too, the great question of young debating clubs will be answered, and Cromwell will have a statue after all!

We have at times given representations of statues recently set up abroad, and have several others in preparation.

CONVERSAZIONE AT PAINTERS' HALL.

ON the evening of Friday, the 28th ult., a numerously-attended *conversazione* was given by the Painter-Stainers' Company at their hall in Little Trinity-lane, Cannon-street. The hall was cheerfully illuminated for the occasion, and many of the visitors were enabled for the first time to make acquaintance with the numerous paintings and other works of art which the Company, as the ancient guild of the artists, has acquired. The visitors were received by Mr. John Gregory Crace (Master), Mr. Wilfred Nicholson (Upper Warden), Mr. Ernest Zuccani (Renter Warden), Mr. Edward Josiah Monnery, and Mr. George Arthur Poland (Treasurers).

Among the works specially lent for the occasion we may mention some well-executed drawings of coloured decoration designed and carried out by Messrs. Crace & Son for the Marquis of Bristol at Ickworth, and for the Marquis of Bath at Longleat. Messrs. Crace also exhibited some old tapestry. Messrs. Morant, Boyd, & Blanford's exhibits included several good decorative designs, some curious old specimens of painted leather, and a quantity of inlaid woodwork. Messrs. Gillow & Co. contributed several designs for decorations. Messrs. Minton & Co. exhibited some fine vases and other objects. Messrs. Heaton, Butler, & Bayne's mural designs were inspected with considerable pleasure, as were also some drawings by the late Mr. Owen Jones and Mr. Pugin. Messrs. Jackson & Graham were liberal contributors to the display, and so were Messrs. George Trollope & Sons, amongst whose objects was a representation of the marble pavement of St. Mary's Roman Catholic Chapel, Moorfields, and an elaborate design for a ceiling. This firm also sent a collection of Hungarian pottery, bronzes, &c.; and there were several specimens of carving in wood lent by Mr. Naylor. Mr. R. W. Edis contributed some water-colour drawings. The many valuable objects belonging to the company, in addition to the pictures, afforded much pleasure to the visitors. The "Camden Cup" was the gift of the historian and antiquary, William Camden, in 1622, according to a bequest in his will. The cup, which has somewhat recently been regilt and repaired, is ornamented with large *repoussé* leaves, and on the upper edge is recorded the fact that it was Camden's gift. A portrait of Camden just restored, was a prominent object on the staircase. There was also exhibited the cup of Mr. John Stock, a great benefactor of the company, also newly restored. Amongst other cups which the company possess is one dating earlier than that of Camden. This was a present from Leonard Fryer, Sergeant Painter, in 1605. Another was the gift of Sir James Thornhill, master of the company in 1721, and a third the gift of Sir W. H. Poland in the year of his shrievalty, 1830, when he was also master of the company.

Everything passed off very well. The Lord Mayor (Sir Francis Wyatt Truscott) honoured the *conversazione* with his presence, and the company included Alderman Sir C. Whetham, the Masters of the Haberdashers', Leathersellers', Tallowchandlers', Carpenters', Joiners', Fanmakers', and other companies, with numerous eminent visitors, and the following members of the court of the Company:—Mr. W. Burchell, Mr. D. G. Laing, Mr. W. Naylor, Mr. G. T. Horrell, Mr. E. Burford, Mr. J. D. Crace, Mr. W. F. London, Mr. D. Laing, Mr. W. Gray, Mr. E. J. Monnery, Mr. J. Warburg, Mr. D. R. Harvest, and Mr. Pritchard (the clerk). During the evening several glees, madrigals, and part-songs were pleasingly rendered, under the direction of Mr. Lester, by Miss Matilda Roby, Miss Bertha Ball, Mr. Montem Smith, and Mr. Winn.

METROPOLITAN WATER SUPPLY.

IN the House of Commons on Monday evening, Mr. Brand asked the Secretary of State for the Home Department whether the Government intended to introduce a Metropolis Waterworks Purchase Bill, with a view to refer the terms of purchase under the Water Purchase Bill in the last Parliament to a Select Committee; and, if not, whether the Government would take any steps to maintain the basis of valuation upon which the Water Purchase Bill was framed, or to prevent the water companies from augmenting the nominal value of their property by charging extra rates upon any increase in the assessment of property by the new valuation now in progress under the Act of 1869, or by their own assessment other than new houses coming under supply.

Sir W. Harcourt, in reply, said it was within the knowledge of the House that a Bill was introduced into the last Parliament to give effect to certain agreements which had been negotiated with the water companies with a view to their purchase. The Bill came to an end at the Dissolution. Grave doubts had been cast on those agreements in regard to their prudence, and the advantages to be derived by the public in carrying them into effect. It seemed to her Majesty's Government quite impossible to take any steps to give validity to those agreements without a public and searching inquiry into the real character of those documents, and their actual relation to the value of the property to be acquired under them. The Corporation of London and the Metropolitan Board of Works, the two most important representative bodies of the metropolis, had addressed to him memorials desiring an investigation, and had undertaken to render the requisite assistance in conducting it. In his opinion, that was a most wise and reasonable request. Nothing short of such an investigation would satisfy the public mind as to the true character of those agreements, and of the property with which they dealt. The Government would, therefore, ask the House to appoint a Select Committee to carry out this inquiry. The exact terms of the order of reference was a matter of some difficulty. It was obviously not expedient to give the inquiry too large a scope, so as to hang up this urgent question indefinitely. The inquiry into the agreements could be bought into a moderate compass so as to be disposed of in the present session. An investigation of the whole question of water supply would evidently extend to far wider limits; at the same time, it would not be possible or desirable to exclude from the mind of a committee appointed to consider the proposed terms of purchase the consideration of the question whether the purchase of the undertakings of the existing water companies was in itself the only or the best possible alternative, and whether it might not be more desirable to obtain from other sources a better supply at a cheaper rate. There was another question which the Corporation in its memorial pointed to as a fitting subject of inquiry—viz., the basis of the charge for water. In conclusion, he referred to the attitude of the Government towards the question. As respected the agreements, he accepted no responsibility in regard to them. As they were to form the subject of a public inquiry, it was not desirable that he should even express at that moment the opinion he entertained of them. The Government would lay them impartially before the Committee, neither as attacking nor as supporting the agreements, but prepared to deal with them as might seem best after their true value had been ascertained. He presumed they would be explained to the Committee by the gentleman who negotiated them, and who would not be the witness of the Government. They would be criticised, tested, and sifted by the representatives of the Corporation and the Board of Works. On this, as on many other subjects, we had to deplore the want of a central metropolitan authority for the general government of London. That was a great and urgent question, and he hoped that the present Parliament would not close without making an earnest attempt at its solution.

OBITUARY.

Mr. Jas. Robinson Planché.—We record the death of this excellent and eminent man with the greatest regret and a deep feeling of personal loss. It is unnecessary now to recapitulate here the numerous works by which he has made the country his debtor. The daily papers have given some idea of their number and variety, and we have ourselves had occasion more than once to refer to them with admiration. As a dramatist, poet, historian, antiquary, and herald, Mr. Planché has left lasting evidences of industry, acquirements, and genius, and by those who knew him best he will be most missed and lamented, and his memory will be most loved. A man of more irreproachable life was never known; during a friendship of many years we never knew him express a mean thought, much less commit a mean action. To the last he maintained his clearness of mind and charity of heart, and within a few hours of his death expressed himself to the writer of this tearful tribute with the greatest precision and liberality of mind on more than one subject.

PLANCHÉ.

"*A CUPIDE, CORONA.*"

ANOTHER warrior on life's battle plain,
Knight of the pen, and victor by the brain,
His armour spotless and his flag untorn
'Spite quips of fortune, scar of time long borne,
Now gently lays the weary burden down
And dons the hero's meed,—the conqueror's crown;
And as we gather round the well-loved dead
We scarce believe the kindly soul has fled;
He lives for ever in the hearts he won
By gentlest words, by deeds of kindness done.
No petty passions did his actions sway,
His guileless nature knew not envy's way;
High on the roll of England's honour'd men
Inscribe in golden type his name whose pen
No profits venal or unjust e'er knew;
But, to his noble craft, his honour, true,
Has left us works that through long years shall stand
As "beacon lights upon time's shifting strand,"
And lead young strugglers on the road to fame
His worth to emulate, and laud his name.
Rest, rest, good soldier!—'tis no longer night,
Find 'yond these voices,—Peace; this darkness,—Light.

C.

DEMOLITION OF AN ANCIENT HISTORICAL LANDMARK IN NEWCASTLE-UPON-TYNE.

DURING the past three years a keen struggle has been going on between a majority of the corporation of Newcastle-upon-Tyne and the bulk of the intelligent inhabitants of the town and district, as to the fate of one of the most interesting landmarks of the past left in the town. The Carliol, or as it is popularly termed, the Weavers' Tower, was built in the beginning of the fourteenth century, by John Carlell, or Carliol, a member of a once powerful local family, at a sharp angle in the town wall, as an additional defence against assault. The Weavers' Company took its maintenance into its hands, and repaired it in 1682, 1762, and 1821. About twenty years ago, when the Mechanics' Institute buildings were erected on a site immediately adjoining, the Corporation interposed to prevent its demolition, but the spirit of Vandalism was more rampant three years ago, when the Corporation, by a considerable majority, voted its destruction, to make room for the buildings of the Free Library. As no attention was paid to the remonstrances of the Press and the most influential residents in the district, a memorial, signed by upwards of 4,000 of the *élite* of the town and neighbourhood, was forwarded to the Lords of the Treasury, praying them to stay proceedings. A commissioner was sent from London to take evidence and report, the result being that the matter was left to the good feeling of the corporation. As was expected from the composition of the majority of this body, the doom of the old tower was fixed, and last week it was razed to the ground, with a degree of haste which proved that they feared another attempt might be made to save it. Two cannon-balls, weighing 22 lb. each, were found deeply embedded in the outer wall, having been interned there since its repair in 1768. Three blocks, inscribed with the names of the stewards of the Weavers' Company at the dates of repair, have been recovered, and will find a place, amongst other relics of old Newcastle, in the keep of the castle.

The original builder had started operations on the level, trusting to the thickness of the walls and their great weight for stability. In this expectation he was not deceived, as the lower and untouched portion of the walls was in a fine state of preservation. In the interior was a fine stone vaulted chamber, the roof ornamented with mouldings, formerly used as the business quarters of the Weavers' Company, and latterly as the rendezvous of the members of a club appropriately named the "Bats." Carliol Tower was one of the best examples of an Edwardian wall tower extant, and much regret, and not a little indignation, are manifested at its needless removal.

CELTIC ART.

THE CYMMRODORION SOCIETY.

ON Wednesday, the 26th ult., a paper on "Celtic Art" was read before this Society by one of its members, Mr. W. St. J. H. Hancock. The chair was occupied by Mr. Jenner, of the British Museum.

Mr. Hancock explained that, although his paper was announced as having for its subject "Celtic Art," he would confine his remarks to decorative Celtic ornament. A nation first gave expression to itself in art; our cairns and mounds were the only records of the early history of our race, and it was not until comparatively modern times that the more complete aid of literature was obtained. Art is also the handmaid of pleasure. The drawing arts began with the necessary, and then proceeded to the beautiful and the superfluous. Forms of true beauty are developed in art, as in nature, in proportion to its cultivation. Hence the importance that the art-education of our country should receive the fullest attention. Mr. Hancock then showed the importance of a correct knowledge of the ethnographical position of a race to understand also the history of its art. Palæontology and archæology supply us with information on which language and physiology are silent in the history of mankind. The lecturer traced the characteristics of the four great building races of mankind,—the Turanian, the Semitic, the Celtic, and the Aryan. While in literature the Celts gave a good account of themselves, they also possessed a power for discovering, appreciating, and executing works of art of the highest order. In support of this statement, Mr. Hancock quoted the words of Fergusson:—"The true glory of the Celt is his artistic eminence. It is not, perhaps, too much to assert that without his intervention we should not have possessed in modern times a church worthy of admiration, or a picture or statue we could look at without shame." The lecturer also referred to remarks made by Mr. Gladstone, who ascribed to the Celt "a very strong natural sense of beauty." To trace the history and influence of Celtic art comprehensively would be to trace the history of civilisation in Europe; for which reason the lecturer confined himself to the peculiarities of some forms of art in these isles, but he expressed a hope that the whole subject would yet be undertaken by some competent person; for in Europe three influences could be traced on art,—first, the influence of Rome; second, of Byzantium; and the third and supervening influence must be traced to a Celtic source, the mainspring of which was in these islands, especially in Ireland, which enjoyed much of the privileges of Byzantium, and whence art sallied forth in those "dark ages" from the fifth to the ninth centuries. After referring to the Stone, Bronze, and Iron-age classification of mankind, and to the chief remains of the Bronze age, which corresponded

with the period of Celtic influence in "prehistoric" times, the lecturer drew attention to art remains of that period. These were principally in pottery, some of it of a highly ornamental character, and which showed that the artists had sound ideas of the true principles of ornament, the styles of which were not superseded, but developed, and applied to other forms by their conquerors. By the aid of diagrams, the lecturer illustrated the characteristics of the stone monuments of these isles, the sepulchral remains possessing great beauty of proportion, and in ornament and sculpture high artistic merit. By the aid of numerous illustrations, the lecturer explained the peculiarities of the early painters' art in Britain, which was characterised by excessive elaboration of ornament, and in colour presented chromatic effects of great beauty, and that "while in Italy and Greece from the fifth to the eighth centuries, pictorial art was all but extinct, and that outside these countries it scarcely existed, there flourished a style of art in the British Isles which had been originated, cultivated, and brought to a high state of perfection, and which was distinct from anything which preceded it." After referring to the commercial value of the cultivation of art to those who look at everything from that point only, the lecturer expressed a hope that the Welsh eisteddfod would be made a means for encouraging its study, and trusted the Honourable Society of Cymmrodorion would be a means of fostering and encouraging the art energies of our fellow-countrymen, and directing that flood of artistic feeling which they undoubtedly possessed into useful and profitable channels.

LEADENHALL AND SOME OTHER CITY MARKETS.

IN Shadwell's comedy of "Bury Fair," *Lord Bellamy*, in his praises of a country life, says: "I view my stately fields and meads laden with corn and grass; my herds of kine and flocks of sheep; my breed of horses; my delicate gardens, full of all sorts of fruits and herbs; my river full of fish, with ponds and a decoy for water fowl, and plenty of game of all kinds in my fields and woods," &c.; to which *Mr. Wildish* replies: "All these things have we at London. The product of the best cornfields at Queenhithe; hay, straw, and cattle at Smithfield, with horses too. Where is such a garden in Europe as the Stocks Market? where such a river as the Thames? such ponds and decoys as in Leadenhall Market for your fish and fowl?" Queenhithe was in former days one of the chief ports or quays for the landing of corn and flour from the West of England,—was long the rival of Billingsgate, and would have remained so had it been situated below instead of above the bridge. In those days the chief corn-markets were at Cornhill and by the church of St. Michael-le-Querne, which stood in the High-street of Cheapside, at the extreme east end of Paternoster-row, and was destroyed in the Great Fire. Bread-street was then the Bakers' Market. Smithfield Market, which for many centuries had been a place of sale for sheep, cattle, horses, and hay, was removed to Copenhagen Fields in 1852, in consequence of the noise, filth, and danger rendering the place an intolerable nuisance. Strange it is to read that in 1615 the City of London "railed it [Smithfield] round about with strong rayles to defend the place from annoyance and danger as well from carts, as all manner of cattell, because it was intended hereafter that in time it might prove a fair and peaceable market-place, by reason that Newgate Market, Cheapside, and Leadenhall, and Gracechurch-street were *immeasurably pestered with the unimaginable increase and multiplicity* of market-folkes." Smithfield Market flitted in 1852 to Islington, and in 1868 Newgate Market, changing its name to the Metropolitan Meat Market, was opened with stately ceremony. The reason why Gracechurch-street is referred to in the above quotation, is that the street was so named, to quote from Stow, "from the parish-church of St. Benet, called Grass Church, of the Herbe Market there kept." The Stocks Market referred to by Shadwell's *Mr. Wildish* was situated on the site of the present Mansion House, and was established exactly 600 years ago for the sale of flesh and fish, but after the Great Fire it became a mart for fruits, roots, and herbs, "for which," says Strype, "it is very considerable and very much resorted unto, being of note for having the choicest in their kind of all sorts, surpassing all other markets in London." Shadwell coincided in opinion with Strype when, in 1689, he published his comedy of "Bury Fair." In 1737 the market was removed to what is now called Farringdon-street, and was known as Fleet Market. It was opened for the sale of meat, fish, and vegetables. The old Stocks Market was doomed to lead a wandering existence. In 1829 the thoroughfare between Holborn and Blackfriars Bridge was found to be too contracted for the traffic, so Fleet Market was removed, and re-established in the immediate vicinity under its new name, Farringdon Market. But even there it has not taken up its final rest, for now a new Vegetable Market is swiftly rising at the corner of Farringdon-road and Charterhouse-street, where it may be hoped the ancient market of the many names and sites will remain for many long years. *Lord Bellamy*, in the play, boasts of "My river full of fish," and *Wildish* with justice retorts, "Where is such a river as the Thames?" for in Shadwell's time "fat and sweet salmons" were "daily taken in this stream," and probably the playwright in his youth tramped across London Bridge to behold the whale (58 ft. in length) that was killed in the Thames between Deptford and Greenwich on the 3rd of June, 1658. No disciple of Isaac Walton passes down Crooked-lane to Old Swan Stairs to angle for the silvery roach that once frequented the starlings of Old London Bridge. "Steam-boats start from the Old Swan pier daily for," &c., &c.

The *fiat* has gone forth that Leadenhall Market must depart. This market had originally been established in East Cheap, a district of which the name alone survives in the Church of St. Clement's, Eastcheap, Clement's-lane. Mention is made of the market in Lydgate's "London Lyckpenny" (1390), and Stow, in 1598, writes,—"This Eastcheap is now a flesh-market of butchers, those dwelling on both sides of the street"; and Strype, in 1720, speaking of the place, says:—"It took its name, Eastcheap, from a market anciently here kept for the serving of the east part of the City, which market was afterwards removed to Leadenhall-street, and now is kept in Leadenhall." The Spanish Ambassador, Don Pedro de Ronquillo, at the Court of Charles II., on being shown Leadenhall Market, expressed his belief that more meat was sold there than in Spain during a whole year. At all periods it seems to have been a place suggestive of good living. Gay, the poet, hints to his reader,—"Wouldst thou with mighty beef augment thy meal? Seek Leadenhall." Pennant, in the beginning of the present century, tells us that the market "is the wonder of foreigners, who do not duly consider the carnivorous nation to whom it belongs," and, in the words of Mr. Peter Cunningham, in 1849, is "the largest and best poultry market in London." Ere long it will travel west, and find a resting-place in Charterhouse-street.

THE CLEMENTS ESTATE AT ILFORD.

LARGE SALE OF BUILDING PLOTS.

THE rustic little town of Ilford, in Essex, is about to undergo a very considerable expansion, by the erection of a large number of new houses and shops on an extensive area of land called the Clements Estate, upwards of 115 acres in extent, which is at present being laid out for building purposes, and the first portion of the estate, comprising 108 freehold sites, was sold by auction at the Angel Inn, on Thursday, the 27th ult., by Messrs. Protheroe & Morris. For the purposes of the sale a tent had been erected in the courtyard at the rear of the hotel, and an unusually large number of persons was present. The number of sites advertised to be sold covers scarcely one-tenth part of the entire estate, at its north-western boundary, described as situate in the centre of the town, seven miles from London, and reached from the City in from twenty to thirty minutes. The several plots were stated to have important frontages to the main London road, also to the new roads to be called Clements, Scrafton, and Albert roads, and to Barking-lane. The principal roads running through the estate are to be 50 ft. and 45 ft. respectively in width, and the secondary roads not less than 40 ft. wide. The roads above named are now in course of construction, and will very shortly be completed and drained. According to the printed particulars, the terms of purchase offer special advantages to builders, free conveyances of the several sites being granted, and possession given for building purposes on payment of 10 per cent. deposit, the remaining portion of payment being extended over a period of nine years. The conditions of the sale contained special stipulations as to the character and class of houses to be erected on the estate. Under these stipulations it is provided that the plots fronting the main road, High-street, are to be reserved specially for shop property, and that the shops to be erected on these plots are not to be so constructed as to be occupied afterwards as private houses only, and no shop is to be erected of less value than 600*l*. As regards the private houses, no detached house is to be of less value than 350*l*., 600*l*. for a pair of semidetached houses, or 300*l*. per house for a row of more than two houses, and no shops are to be formed nor any business carried on on that part of the estate laid out for private houses. Other conditions provide that no building is to be erected or used as a factory, and no manufacture is to be carried on, nor any operative machinery to be fixed or built on any lot. All the plans and elevations of the several shops and houses are to be approved by the architects and surveyors of the vendors, and no public-house is to be erected on the estate.

Mr. Morris, who conducted the sale, stated, in reply to a question, that the Grays Water Company had undertaken to lay down their water-mains on the estate as soon as building operations were commenced. From the commencement of its sale to its close there was a very spirited competition for the several lots, all of which were sold. The shop plots facing the main London road, having a frontage of 20 ft., by an average depth of 100 ft., realised from 190*l*. to 216*l*. each; those fronting Clement's-road, having a frontage of 20 ft. each, with a depth of from 125 ft. to 129 ft., 50*l*. to 82*l*.; the plots in Scrafton-road, frontage 20 ft., and depth 136 ft. to 156 ft., from 34*l*. to 43*l*. each: those in Albert-road, frontage 20 ft., and depth 130 ft. from 38*l*. to 46*l*. each; and those fronting Barking-lane, having a frontage of 20 ft., with a depth of 134 ft., from 61*l*. to 81*l*. each. The total proceeds of the evening's sale amounted to about 7,500*l*. At its close Mr. Morris stated that the sale of the second portion of the estate would take place on Thursday, the 17th inst.

It may be added that the estate, which is being laid out by Messrs. Whitmore & Kennard, surveyors, of Devonshire-square, Bishopsgate, will contain streets and roads upwards of four miles in length. Five of these roads, running from west to east, in the direction of Romford, will be more than half a mile in length each, intersected by four other roads, stretching from north to south, each of which will be upwards of a third of a mile long. The total number of houses and shops to be erected on the estate is about 1,000, representing a population which may be estimated at about 5,000 persons.

PRODUCTIVE CO-OPERATION.

MR. W. SWALLOW, of Leeds, read a paper on this subject at the Co-operative Congress, held recently at Newcastle-on-Tyne. He said that co-operation was destined to raise the working classes to a higher level in the country than they at present occupied, but this would never be done by mere shopkeeping. There were already productive societies in active operation in various parts of the country, as the exhibition of their goods in connexion with the Congress amply testified; and, as a first step towards working out the productive side of the movement on an extensive scale, he held that it was incumbent on co-operators in all parts of the country to see that they had such sympathy and practical aid as would enable them to be brought to a successful issue. He was afraid there was not a sufficient amount of loyalty in this matter displayed in their societies. The goods of the various productive associations were not sufficiently pushed among their members, and in many cases committees and members alike displayed an apathy towards the goods of their productive brethren which was really astonishing. The wholesale, as the proper centre for distribution, should see that the goods of the producers were supplied to the stores. The managers of this federation for distribution very properly desired all distributive societies to be loyal to them, and surely it was not too much

to ask in return that they should be loyal to the productive societies,—more loyal by far than they had hitherto been. The corn-mills appeared to be among the most successful of their productive enterprises, and most of the other attempts which had met with any amount of success had been established to produce articles required for daily use by the members of their stores. The wholesale, and some of the larger distributive societies, had manufacturing departments in connexion with them for producing articles of a similar class. Such production must naturally be limited, and from the nature of societies formed for distributive work, and for the benefit of consumers, there would be a tendency to cripple the productive side of the work. To have a man properly interested in his work he must become a living part of the firm for which he laboured, and have the prospect of sharing in the proceeds of the work he assisted to perform. He should also be interested in the stability and success of the works by being the owner of a fair proportion of the capital by which it was carried on, and this was impossible, excepting in an almost infinitesimal degree, in the distributive society's productive works referred to; and until they could get men interested in both these ways, viz., as sharers in the profit on capital, and in reaping the result of labour, they could not hope for very great results from production. It was time workmen should be taught to establish workshops of their own for carrying on the various branches of trade with which they were familiar, investing therein their own capital, so far as able, as a guarantee of their earnestness, and also investing therein their abilities, energy, intelligence, and labour,—in fact, themselves, and taking as their reward, when successful results were attained,—as they surely would be when the scheme was properly tried,—the larger proportion of the gain. No doubt a difficulty would be experienced at the commencement of such undertakings for want of sufficient capital. The men, though willing to embark what they had in their own undertaking, would yet not have enough to carry on the work effectually, and this might fairly be got over by the various distributive societies assisting by advancing a portion of the funds which they had saved by previous economic arrangement in the movement for the benefit of the workers; and trade unions and other societies might, he thought, be induced to advance a portion of their funds for such a project, for he knew of no better way of utilising them than in experiments of such a kind, the success of which would depend so largely upon themselves or their fellow-workmen. Every workman employed in a co-operative workshop should be a shareholder therein, and until sufficient capital was had to meet all requirements, should be expected as far as possible to leave his profit therein for further development. They had to a very large extent by distributive co-operation taught the working-men how to be thrifty and to save money; it was now of the utmost importance they should be taught how to utilise the money thus saved for their own further advantage.

CO-OPERATIVE COTTAGE BUILDING.

AT the Co-operative Congress recently held in Newcastle-on-Tyne, Mr. John Thirlaway read a paper on "Co-operative Cottage Building and the Land Question." He said that co-operative societies investing their capital in supplying their members with dwelling-house accommodation made one of the safest and most profitable investments he knew of. At past conferences the plan recommended was to commence on the building society system; that was, for the society to lend individual members money with which to purchase a house, the society to take the deeds as security, and the money to be repaid to the society over a period of years. Sometimes it had been advocated that the society should build the houses, but in every other respect the building society plan had been recommended. He was one of those who thought that the plan of lending the society's money to individuals was an individualism even more objectionable. Lending societies' money to individuals would, he thought, benefit very few people, and those few the wealthiest amongst them, and, therefore, a class who, as a general rule, could very well look after themselves. The better plan of doing this business, and the one he recommended, was that instead of the society aiming at making a few individual landlords, which was all they could do on the individual system, they should aim at making the societies landlords,—that was, instead of the societies lending money to individuals to purchase houses, the societies should purchase or build the houses, and let them for the benefit of the members at large. This plan would do more good, and would distribute that good more equally; it would reach the very poorest amongst them, and as a result give more general satisfaction. They had found by experience that they carried on shopkeeping at a good deal less expense than private trade. Was it not also probable that they could supply dwelling-house accommodation at a less cost than private individuals? It was a common thing for private persons to give 5 per cent. for collecting their rents. Could a co-operative society not do it much cheaper by making it the duty of one of its officers to do this along with his other work? Would co-operative societies not have an opportunity of advertising their houses, and selecting good and trustworthy tenants, which private trade had not? Would not co-operative societies have security for the payment of the rent by having a provision in their rules that such or any other debts could be deducted off dividends or share capital, which private trade had not? And in the matter of the societies undertaking to build houses, he thought the business could be done more economically than it was done by private trade. Instead of societies lending money to their members, he would have them to borrow money both from their members and the public, and to use it in the way he had indicated,—that was, instead of the societies lending their spare capital to individual members, and thus enabling them to make, say, 10 per cent. or more, he would have the societies to be the borrowers, and thus make the additional percentage for the benefit of the larger number,—the members at large. He might be told that the public generally would not lend money to a co-operative society. To begin with, they would no doubt be timid; but, in the end, lenders of money, like wholesale dealers, would discover that co-operators were a safe class of persons. The great bulk of the money lent by building societies was lent to them, not by their shareholders, but by what were termed preference shareholders, repayable on a three or six months' notice if they had it to pay. Persons lent thousands of pounds to those societies without seeing anything for their money, and the building society re-lent it over a long period of years. Was it not probable, if the co-operators had enterprise enough to go into this matter, that the lenders of money would sooner lend it to, say, the Gateshead Co-operative Society, which was making an average of 20,000*l.* a year profit, when they would see, in addition to this, and have as security, the streets of houses which the society had built with the money borrowed? He thought they would. In the Gateshead Society they made dividends enough which, if entirely applied to the purpose which he had indicated, together with borrowed money, would enable them, in a few years, to have a house to let to almost every member, and thus secure the profits, the power, and the influence arising from the business.

ST. PAUL'S CHURCHYARD.

DURING the last week or ten days the traffic on the north side of St. Paul's churchyard has been somewhat impeded in consequence of the improvement and relaying of the footpath and carriage way, which are at present in progress. The old, worn-out flags have been removed from the footpath, which has been relaid with asphalte, from the east end, opposite the approach to Cheapside, extending westward to the top of Ludgate-hill. This portion of the work has just been finished, and the carriageway is now undergoing a similar process. The old square set stone-work is being taken up and carted away by Messrs. Mowlem & Co., and in its place asphalte pavement will be laid down, resting upon a bed of concrete about 12 in. in depth. The contractors for the work are the Limmer Asphalte Company.

At the east end of the cathedral yard another interesting piece of workmanship is in progress. Over the spot where the foundations and approach steps to Old St. Paul's Cross were some time ago discovered, an ornamental enclosure is in course of construction which will denote the place where the cross formerly stood. The enclosure, which is octagonal in form, has a stone boundary at the base, and we understand that the area within—about some 20 ft. in diameter—is to be ornamentally paved, mosaics being a portion of the materials intended to be used.

SIZE AND PROPORTION.

SIR,—The signature of "Toreuticos"* is not requisite to indicate that he is a practical man. He, however, apparently relies on a photographic lens for perfect accuracy. The distortion he mentions, in the enlargement of the beautiful gem from the British Museum, finds its explanation in his use of that means. One ready although but proximate mode of testing how far difference of scale calls for modification of proportion might be obtained by having a statuette, such as the little Apollo in the Bronze-room of the Museum, photographed in a side view, so as to reduce the distortion to a *minimum*, and then enlarged to life-size on a large canvas, by the usual squaring method. In respect to the Medicean Venus, the grace of the figure would be liable to be injured by a larger proportion of head. It may be accepted that probably a somewhat diminished scale was adopted for that celebrated statue, for the purpose of giving delicacy to the nude form, and not that the intention was to represent the head of less than due size. The remarks quoted, of the late Mr. Cheverton, and also of "Toreuticos" himself, seem quite to the purpose, in respect to variation of scale involving considerations of modification of proportion. Whether the cause be artistic, optical, or atmospheric, or a combination of the three, experiment would probably be more effective and satisfactory than any individual theory. B.

SIR,—The necessity for altering works of art, to make them appear right when executed to different scales is, I fancy, one amongst those numerous fallacies which are nursed with a misplaced affection and solicitude, to the neglect of far healthier mental offspring. The matter has but to be put in a very simple way to show how erroneous the fancy is. Suppose either an exact cube, a sphere, or other regular solid were to be reduced or enlarged with accuracy by Cheverton's apparatus: does any one mean to affirm that these would, either in enlargement or diminution, appear disproportioned to the eye, or other than as the originals? Manifestly they would not, and what is true of geometrical forms is also true of artistic. We may constantly see works of art either enlarged or reduced by photography without noticing any such discrepancies as those alluded to. If there really were any such apparent alteration in proportion in either the reduced cube or in the reduced sphere, either would appear narrower, distorted, in some one direction or another. Will your correspondent "Toreuticos" inform us in which direction this distortion is said to occur?

In receiving evidence upon this point we should have to be on our guard against astigmatism in the eye of the observer. If, however, after guarding against this source of error, we should still discover evidence of a residuum of apparent aberration, we should have to ascertain whether such occurs with objects whose horizontal measurement is less than that of the space between the two eyes; for under such conditions we know that these see, to a certain extent, round such objects. We must ourselves confess that, although we have had to diminish and enlarge works to "scale," we have never noticed the phenomenon alluded to; but in enlarging "mechanically" from small works we have frequently discovered what egregious faults of disproportion had previously escaped our notice. Every painter and sculptor has at some time or other experienced the deceptiveness of miniature sketches.

METER.

Sanitary Appliances.—In connexion with the conference on the Progress of Public Health, which, it is announced, will be held by the Society of Arts on the 10th and 11th of this month, it is intended, as in former years, to hold an Exhibition of Sanitary Appliances. These exhibitions, though on a small scale,—the Society's premises not affording room for a large collection,—have been found very useful in former years.

* See p. 675, *ante*.

ARCHITECTS AND DISTRICT SURVEYORS.

HAYMARKET STORES.

SIR,—I regret it is necessary to ask you to allow me to reply to the letter of Mr. Thomas Verity, on the above subject, in your last week's paper, as it contains statements concerning myself which are untrue.

As regards the summons against Messrs. Kirk & Randall, for not producing drawings of the buildings, 28, Haymarket, for my inspection, I find I have been inadvertently led into an error. I quite understood at the time that the magistrate allowed me to withdraw the summons, but I have to-day inspected the summons-book at the Police-court, and find that the magistrate has marked it "dismissed." Since my letter to you the drawings have been produced by Messrs. Kirk & Randall, at my office, but no information was given in them concerning the internal iron construction, and this I understand, as Mr. Verity states in his letter, he still refuses to submit to my inspection. This is the real point at issue, and, as an official charged with enforcing the laws for public safety, I am determined to prove whether the law gives me power or not to examine the drawings of such work.

The last summons was dismissed on the plea that I asked for the drawings to be produced at my office. I shall now serve a fresh notice on the builders to produce the drawings, including iron construction and floors, on the building for my inspection, and fight the question out. I think your readers and the public generally will agree that I am right in my determination.

The whole of the interior of the buildings in question, and part of the external walls, consist entirely of iron construction, and it is almost puerile to assert, as Mr. Verity does, that the District Surveyor has no right whatever to examine or see the drawings of such work. The mere arrangement of the plans and design of the elevation can be of no interest whatever to an officer who is charged with the duty of reporting on the stability and safety of buildings, and what motive any architect can have in refusing to allow his builders to submit the drawings showing the constructive principles on which his building is erected, including the question of its internal tie and the strength and supports of the floors, to the District Surveyor's inspection, it is impossible to imagine, unless, as the magistrate remarked, there is some reason for concealment.

With regard to Mr. Verity's other statements, the following are the real facts:—In December last my attention was called, on visiting these works (by some of the workmen), to what they considered the dangerous character of the iron construction, which consisted of independent iron cross-shaped stancheons, with projecting caps, carrying wrought-iron girders 20 ft. long, running from the back of the building to the front wall. These girders have only a bearing of 1½ inch in some cases, and 1½ inch in others, on the projecting cast-iron caps, and they are each bolted together by four wrought-iron bolts at each end.

I spoke to Mr. Verity several times on the subject. He referred me to the engineer who designed the ironwork, and I saw that gentleman, who promised to send me his detail drawings and see me about them. This he failed to do, as he now informs me, by Mr. Verity's orders. At last, on March 8th, after repeated efforts to get the construction amended, I reported to the Board of Works that it was necessary, under the Dangerous Structure sections of the Act of Parliament, that an order should be made to strengthen or secure the internal iron tie of the building, and I wrote a special report on the question. This was referred to the Building Act Committee of the Board, when Mr. Verity and myself were asked to attend. Mr. Verity did not do so, but a solicitor appeared for him, and the engineer who designed the ironwork also attended. The matter was heard at great length, and a resolution passed that the Board retain counsel to support my view of the case. I next received a letter from Mr. Ward, the Board's solicitor, asking me to suggest the names of the witnesses it would be desirable to call to support the dangerous structure notice, but upon the matter again coming before the committee for instructions as to the prosecution, it was resolved that Sir Joseph Bazalgette and Mr. Valliamy be asked to make a survey, and give a joint report on the construction. This they did, and Mr. Verity, who refused, and still refuses, to submit the drawings of his iron construction to me (the legal responsible official), says that, as an act of courtesy, he submitted them to them. Please note those gentlemen have no responsibility whatever in the matter, but it was assumed in the case of the Haymarket catastrophe, three doors from the site in question, that I had.

Mr. Verity says my unwarrantable proceedings have collapsed. If he will inquire at the Dangerous Structure Office of the Metropolitan Board of Works he will find he is in error, as they are still pending.

The two following clauses from the joint report of the Engineer and Architect to the Board will, I think, prove that there was good ground for my interference. Those gentlemen's report contains the following clauses:—

"It is desirable that three rows of wrought iron tie-rods should be carried from joist to joist, from the front wall, through the rolled joists, back to the second stancheons, being a distance of 42 ft. from the front wall."

"So far as we have been able to ascertain from a cursory examination of the drawings, the works are generally designed of sufficient strength, but it would seem that, since the design was prepared, it has been determined to place very heavy weights on the fourth and fifth floors, and the joists should be strengthened accordingly."

The matter, by the last resolution of the Building Act Committee, I am informed, now stands thus,—that if the Stores do not execute the works proposed in the Architect's and Engineer's report, the Board proceed with the Dangerous Structure notice.

It is with pain that I am compelled to publish this statement, but after Mr. Verity's letter I have no alternative.

While the proceedings were pending, Sir James Hogg wrote me to meet him on the building, and explain the construction, which I did. This is the only occasion when I have met any member of the Board on the subject.

My whole connexion, as District Surveyor, with the buildings for the Haymarket Stores, has been one of constant worry and litigation, which has been literally forced on me, as the following statement will show.

In January, 1877, an accident happened to the premises in Oxenden-street, when several adjoining houses partially fell down, and a number of people had to be removed from them by the police, and in consequence numerous dangerous structure notices had to be served.

In March, 1879, an order was obtained from Mr. Newton to compel the Stores to tie down a heavy dangerous cornice which they had erected in Oxenden-street. This took several weeks' litigation.

During the last month the Stores have been convicted of erecting irregular wooden buildings, and ordered to take them down. They have also been ordered to make their buildings conformable to the Act as regards fire-proof separation; but from this they are now appealing.

Summonses have also, on several occasions, been taken out against them for erecting ironwork fronts to their buildings without submitting plans or obtaining the sanction of the Board of Works, which they have afterwards been compelled to obtain. And I need scarcely refer to the heavy litigation which has so constantly taken place with regard to old dangerous party-walls and other matters, which have been fully detailed in your police reports, and I submit that the attempt to achieve notoriety in connexion with Building Act cases has been initiated, as regards the Stores, by Mr. Verity, and not by your humble servant, who has no alternative but to do his duty.

ROBERT WALKER,
District Surveyor of St. Martin-in-the-Fields.

THE SYDNEY EXHIBITION AWARDS.

WE have received a list of the official awards, too late to give it entire in our present issue. It is, moreover, understood that the list published by the Sydney Commissioners is extremely defective, and will have to be carefully revised, there being numerous omissions. The display of furniture by Messrs. Arrowsmith & Co. was very fine, but the prices were regarded as being too high for Colonial buyers, who preferred purchasing cheaper and less artistically-finished goods. The solid parquet shown by the same firm has obtained two prizes, a convincing proof of the manner in which it is being appreciated in Sydney, where it is likely to lead to business of a remunerative character. Another important exhibit was that of Messrs. Camm Brothers, of Birmingham, who have obtained a first prize for their stained-glass windows, and will probably have another for their reredos of oak with tile panels, representing "The Lord's Supper." Messrs. Kenrick & Co., of West Bromwich, had a fine exhibit of their goods, including a display of metal work for buildings, which has led to several large orders being given them. They have obtained the largest number of awards given any single firm, and it is believed that they will, in consequence, receive a special gold medal. Messrs. Sessions & Sons, of Gloucester, had several examples of their enamelled slate goods, which were speedily sold.

Classes 410-427, *Engraving, Designs, &c.*—Allan & Co. (castings), 1st; Aitchison, G. B. A., London (architectural designs), 3rd; Art-Union of London (engravings), 1st (special); Barry, Ch., London (architectural designs), 1st; Boreham, F., London (architectural designs), 3rd; Brandon, D., F.R.I.B.A., London (architectural designs), 2nd; Brooks, James, F.R.I.B.A., London (architectural designs), 4th; *Builder* the, newspaper (engravings), 2nd; Cameron & Elliott (designs for decorating), 1st; Camm Bros., Birmingham and Smethwick (stained glass windows), 1st; Champneys, Basil, London (architectural designs), 4th; Clarke, E. F. C., Temple, London (architectural designs), 3rd; Clarke, T. Chatfeild, London (architectural designs), 3rd; Coe, H. E., London (architectural designs), 1st; Fine Art Society, London (engravings), 1st (special); *Furniture Gazette* (engravings), 4th; Goodman, T., South End, Essex (architectural designs), 3rd; *Graphic*, the, London (engraving, &c.), 1st (special).

ART-UNION OF LONDON.

Principal works already selected by prize-holders:—

From the Royal Academy.—Near Tintagel, Cornwall, T. S. Croxford, 100*l.*; The Mill-stream, Arundel, William Pitt, 40*l.*; Waiting, Edith Ballantyne, 35*l.*; Cliffs at Fairlight, W. H. Borrow, 35*l.*; Taking it Easy, A. D. Cooper, 35*l.*; Fairy Tales, Mary L. Gow, 31*l.* 10*s.*; Firewood Choppers, B. B. White, 25*l.*

From the Society of British Artists.—Landscape and Cattle, Evening, George Cole, 200*l.*; Market Boats on the Maas, Holland, G. S. Walters, 75*l.*; A Rest on the Moors, E. R. Breach, 50*l.*; A Quiet Afternoon, James Gow, 45*l.*; "What's in a Name?" James Hayllar, 45*l.*; The Avenue, Haddon Hall, S. H. Baker, 40*l.*; A Pool on the Glaslyn at Baddgelert, J. Jackson Curnock, 40*l.*; Itinerant Merchants, Leopold Rivers, 40*l.*; Heart-o-Carrie, Isle of Skye, A. W. Williams, 40*l.*; A Braw Fly for Salmon, W. H. Weatherhead, 37*l.*; Fancy Tree, A. F. Patten, 36*l.* 15*s.*; River Scene: Sunset, E. J. Cobbett, 35*l.*; The Evening of a Quiet Life, L. C. Henley, 35*l.*; Near Lynchmere, Hampshire, James Peel, 35*l.*; Wind against Tide: Holland, G. S. Walters, 35*l.*; Sunset, Littlehampton, G. S. Walters, 35*l.*; The Village Maid (marble statuette), Geo. Halse, 31*l.* 10*s.*; Spring Flowers, J. T. Peele, 30*l.*; The Look-out for Father's Boat, J. T. Roberts, 30*l.*; Love's Messenger Attacked, C. J. Durham, 21*l.*; In at one Ear, and out at the Other, Miss Fraser, 20*l.*; Will it go Off? Robert W. Wright, 20*l.*; A Rest by the Way, H. Birtles, 15*l.*; A Study from Life, Frank Bramley, 15*l.*; A Lady of the Sixteenth Century, E. Blair Leighton, 15*l.*; Hurley-on-Thames, J. Whipple, 15*l.*

From the Crystal Palace Gallery.—Babbacombe Bay, South Devonshire, T. Tully Lott, 25*l.*

From the Royal Scottish Academy.—A Spate on the Conon, Ross-shire, W. Beattie Brown, 60*l.*; the Falls of Conon, Ross-shire, Jas. Ferrier, 27*l.*

From the Society of Painters in Water-Colours.—A Farm-yard, Otto Weber, 75*l.*; On the River Brathay, near Skelwith, David Cox, jun., 53*l.* 10*s.*; Twilight, S. P. Jackson, 35*l.*; Winter, Fawley Court, Henley, Charles Davidson, 25*l.*; Sunlit River, Paul J. Naftel, 25*l.*; Lane at Henley, Early Spring, Charles Davidson, 21*l.*; Cornish Coast, the Logan in the distance, Charles Davidson, 20*l.*

From the Institute of Painters in Water-Colours.—The Introduction, W. L. Thomas, 15*l.*

From the General Exhibition of Water-Colour Drawings.—London-road, Lincoln, John O'Conner, 25*l.*; "No Fox here to-day!" John J. Richardson, 23*l.* 10*s*; St. Michael's Mount, Penzance, Frank Walton, 20*l.*

From the Royal Albert Hall.—The Return of the Lifeboat, Ramsgate, T. R. Miles, 45*l.*; A New Song, F. Slocombe, 25*l.*

SALE OF THE BUILDINGS OF THE SOCIETY FOR PROMOTING CHRISTIAN KNOWLEDGE, LINCOLN'S-INN-FIELDS

THE several blocks of buildings in Lincoln's-inn-fields and Great Queen-street, which until recently were in the occupation of the Society for Promoting Christian Knowledge, were offered for sale at the Auction Mart on Wednesday, by Mr. Edwin Fox, of the firm of Messrs. Fox & Bousfield. Part of the printing and publishing establishment of Messrs. Wyman & Sons is situated between the Lincoln's-inn-fields and Great Queen-street properties, and at the outset of the sale Mr. Fox, the auctioneer, stated on behalf of the vendors that they had received a notice from Messrs. Wyman to the effect that they were about to make certain structural alterations in their premises. Plans of these intended alterations had been submitted to the vendors, which he (Mr. Fox) had seen, and there was no objection to them. According to those plans the party-walls of the vendors' property would not be at all interfered with.

The property, which was offered in three separate lots, was described as entirely freehold, and occupying altogether a superficial area of 8,300 feet. It was observed in the particulars that the estate unquestionably occupied one of the most improving sites in the whole of London, being within five minutes' walk of the Courts of Justice and the several Inns of Court, close to Lincoln's-inn, and midway between Gray's-inn and the Temple. The first lot comprised No. 67, Lincoln's-inn-fields and No. 77, Great Queen-street adjoining, containing an area of 5,067 feet, with a return frontage of about 200 feet. The Lincoln's-inn-fields block, formerly the "house" of the Society, was described as a substantially erected building of four floors and a basement, built of brick many years ago in such a manner "as almost to bid defiance to the ravages of time." No. 77, Great Queen-street was described as formerly the "depository" of the Society, also a substantial brick building of four stories and a basement. The biddings commenced at 14,000*l.*, and 18,200*l.* was ultimately offered, but, no further advance being made, the auctioneer intimated that it could not be sold for that sum, stating that more than that amount had already been offered for the property by private contract. It was withdrawn at 20,000*l.* The next lot consisted of a large warehouse of four stories, No. 76, Great Queen-street, occupying 1,547 superficial feet. These premises were sold for 4,300*l.* The third lot, Nos. 72 and 73, Great Queen-street, occupying an area of 3,370 feet, described as constructed within the last few years, and specially designed for carrying heavy weights, realised 6,200*l.*, the auctioneer stating that the premises were well worth 8,000*l.* and that the purchaser had got a very great bargain.

A CASE UNDER THE BUILDING ACT.

REFUSAL OF NOTICE.

ON the 21st ult., at the Lambeth Police Court, before Mr. Ellison, Mr. Henry Jarvis, district surveyor of Camberwell, summoned Mr. Woodham, of Copeland-road, Peckham, builder, for neglecting to give notice of the erection of a structure on his premises. It was described as being about 24 ft. square and 13 ft. high, with open sides, with wood-framed bases and upright posts let into the ground, supporting a corrugated iron roof.

The defence was, that the structure was not a building within the meaning of the Act.

After hearing the evidence on both sides, the magistrate took time to consider his decision, and in giving judgment said he was of opinion that the said structure was a building under the Act, and as it was not constructed in accordance with the Building Act, the building must be pulled down, and he made an order accordingly.

A WARNING TO TOTTENHAM.

WE have already stated clearly that the paragraph thus headed, which appeared in our journal for May 15th, applied to Willesden, and was ascribed to Tottenham through misapprehension; but the Local Board are not satisfied, and one bellicose member of it, who erroneously asserts that the explanation is not published in the same size type as the original paragraph, talks of "compelling" us to do something or other more. We have received a second,—perfectly courteous,—letter from the Clerk to the Board on the same subject, but think it unnecessary to print it. We must take the liberty to add that, although the particular warning objected to did not apply to Tottenham, we are by no means sure that this, for the most part, well-managed district, will not be the better for a warning in other directions. Several letters from inhabitants of Tottenham have reached us since this matter has been under discussion, and will receive attention.

THE MORTUARY, OR DEAD-HOUSE, AT TOTTENHAM.

SIR,—Will you kindly (or some of your readers) inform the inhabitants of Tottenham, through your valuable journal, the dimensions and value of the materials composing the above-named building, and if it is true that the estimate given in for its composition and construction was, or is, 36*l.*? because the inhabitants and the querists are becoming rather restless respecting the rumours of its price, considering its apparent size. We must hold the surveyor liable. Moreover, we think Mr. Childs had better leave the editor of the *Builder* alone, and concentrate his abilities for the benefit of Tottenhamites, whom he has promised to represent. Also, we would like to know if it is thought advisable to help fill up the ditch running from Stonely South with the carcasses of the surveyor's late horses? TWO OF US.

CONTINENTAL ITEMS.

The Electric Light in the Paris Salon.—The Paris *Salon* is this year again illuminated every evening by electricity, the Jablochkoff system being employed for that purpose with very satisfactory results, according to the testimony of Mr. John Leighton, given in a letter to the *Times*. The display made by the Société Générale d'Électricité this year is, however, far in excess of what it was last year, the number of lights having been increased from 260 to 400, and the quality of the Jablochkoff candles having been improved. To control such a number of lights from one centre is in itself a feat in electricity which three years since would have been regarded as impracticable. It indicates in an unmistakable manner the practical advance of electric lighting. All the machinery necessary for the production of this body of light, which is stated to be equal to that of several thousand gas-lamps, is contained in a wooden shed, 25 mètres in length and 8 mètres in width. In the central transept of the *Salon*, where the statuary is exhibited, there are 150 lights, some of which are suspended from the roof, while others are grouped in clusters in the form of candelabras. In the picture galleries 250 more lights are similarly distributed.

Destruction of an Ancient Building at Liège.—The Basterie, in the Rue des Guillemens, at Liège, was partly burnt a few nights ago. It was erected in the middle of the thirteenth century by the Prince-Bishop Henry of Guelders, who make it a kind of seraglio, and there brought up his numerous illegitimate children, whence it acquired the name of Bastarderie, ultimately corrupted to Basterie. It was restored three or four centuries ago; but up to fifteen years since it was a manor-house, with moat, portcullis, and fine garden, containing a grotto, with ceiling and walls of shells, and jets of water.

SURVEYORSHIP ITEMS.

The Goldsmiths' Company.—From among the eight selected candidates for the surveyorship, mentioned in our last, Mr. Penfold has been elected to the office. There was a large number of eligible candidates, the friends of some of whom fought manfully.

Southampton.—At the last meeting of the Borough Council, the salary of the borough surveyor, Mr. W. B. G. Bennett, was increased by 50*l.* per annum, an amendment to increase it by 100*l.* being lost by one vote only. Mr. Bennett formerly held the office of assistant-surveyor to the Corporation, and was appointed surveyor two years ago, on the resignation of his predecessor, Mr. J. Lemon.

The Brownhills Local Board have appointed their surveyor, Mr. J. Siddalls, architect to the new public buildings, and clerk of works to the sewerage works of the Ogley Hay and Brownhills district. The public buildings will include board-room for Local Board and School Board, offices for School Board clerk, Local Board clerk, surveyor, collector, and inspector, assembly-room, magistrates' room, committee-room; with stabling, stores, &c., and residence for the surveyor.

PROVINCIAL NEWS.

Redruth.—The "Lamb and Flag" Coffee Tavern, erected at a cost of 800*l.*, has just been opened. In style it is a free treatment of Gothic. The walls are faced with local elvan stone, with granite for the plinths, and Bath stone for the other dressings. The lamb and flag, as well as the stone carving generally, were the work of Mr. Harry Hems. The builders were Mr. Hodge and Mr. Gray, of Redruth, the former doing the carpentering, and the latter doing the masonry work. Mr. James Hicks, of Redruth, was the architect.

Boston Spa.—On the 18th ult. the corner-stone of a new wing to the Institution of St. John of Beverley for deaf and dumb children at Boston Spa, was laid by Dr. Cornthwaite, the Roman Catholic Bishop of Leeds. The addition comprises the first section of a plan which will accommodate 100 girls, consisting of refectory, class-rooms, workrooms, and dormitory. A complete system of drainage, and an underground tank for soft water, capable of containing 40,000 gallons, have been provided. The architects entrusted with the work are Messrs. Hadfield & Son, of Sheffield; the contractor being Mr. R. Brelsford, of East Keswick, near Wetherby.

SCHOOL BUILDING NEWS.

Patricroft.—A new wing has just been added to Christ Church National Schools, Patricroft, Manchester. The building, which has cost 620*l.*, has been erected from plans prepared by Mr. J. Lowe, architect, Manchester. The new wing, which was opened on the 10th ult., will accommodate 272 additional scholars.

Clapton.—The Sunday schools, which have just been erected, in connexion with the Clapton Wesleyan Church were opened on the 19th ult. by the Rev. S. Evans Rowe. The building is in the Decorated Gothic style. The principal features of the edifice are a large room capable of accommodating 350 children, four class-rooms, all opening into the former, and above these an infants' room, for 150 children. The architect was Mr. Charles Bell, and the builder Mr. W. Shurmur, of Clapton. Mr. G. E. Pike was clerk of the works.

Ross (Herefordshire).—The foundation-stone of a mission-room and Sunday school in Over Ross-street has been laid. The building, which will be erected from the designs of Mr. George Pearson, of Ross, is to be in the Romanesque style, and capable of seating 200 people.

Kelvedon.—The new Congregational schools at Kelvedon, Essex, were opened on the 18th inst. The buildings have been erected from plans prepared by Mr. Chas. Pertwee, architect, Chelmsford, the work having been executed by Mr. Siggers, bricklayer; Mr. Britton, carpenter; and Mr. J. Polly, painter. The total cost, including that of the partial re-lighting of the chapel, has been 466*l.* 12*s.* 5*d.* Two new class-rooms and an infants' room have been built on the ground floor, while two more class-rooms will be obtained by one of the vestries being partitioned into two compartments. Above these is the main schoolroom, which is 40 ft. long and 17 ft. wide.

Edinburgh.—The new Roman Catholic school, which was recently erected on a site fronting the Cowgate, between Blackfriars-street and South Gray's-close, to supply the place of the old school of St. Anne's, Niddry-street, has been opened. The new school has been erected, at a cost of nearly 3,000*l.*, from a design by Mr. R. Morham. Accommodation is secured for 600 pupils,—300 in the infants' and 300 in the girls' departments. The building extends to about 93 ft. from South Gray's-close towards Blackfriars-street. Externally, the building presents towards the Cowgate a frontage, showing at each end a high-peaked gable, carried out to the line of the foot-pavement, the intermediate part being recessed to the extent of 3 ft. The windows are mullioned, those on the lower story having transoms, and the centre and end windows on the after-story pointed arches over them. The Cowgate at this point has been widened to 36 ft., nearly double its former width, while South Gray's-close has also been materially improved. The new building, which is entered from South Gray's-close, is of two stories, each consisting of a large general school-room, 63 ft. long by 28 ft. 6 in. wide, with two class-rooms entering off each at one end, and with apartments for the teachers and other accommodation at the other. The infants' school is on the lower story, and is provided with a large gallery.

DISSENTING CHURCH-BUILDING NEWS.

Maxworthy.—The new Bible Christian Chapel at Maxworthy, North Petherwin, near Launceston, has been opened for divine worship. The plan of the chapel is that of a parallelogram, 53 ft. 5 in. by 25 ft. wide. At the east end is a school-room, under which are stables, &c., for the accommodation of local preachers. Seats are provided for 142 persons in the chapel. The roof is open-timbered, and trefoil in shape. The walls are of local stone and red and white brick. The architect was Mr. Otho B. Peter, of Launceston.

Egham.—A Wesleyan church has lately been opened at Egham, erected at the sole expense of Mr. T. W. Pocock, of Virginia Water. The style is thirteenth-century Gothic. The architect is Mr. James Weir, of London, and the builders are Messrs. Oades & Sons, of Egham.

Bovey Tracey.—The erection of a new Wesleyan chapel is to be commenced here immediately, from plans prepared by Mr. Cull, jun., of Newton.

Buckingham.—The Primitive Methodist Church in the Moreton-road has been re-opened, after alterations, carried out by Mr. Brown, builder, at a cost of about 250*l.*

Brecon.—The new Baptist chapel at Brecon was opened on the 9th ult. It is Gothic in style, capable of seating 500 people, and has a detached schoolroom which can seat about 200, and will be used for Sunday school and other meetings. The erection of the buildings cost 2,000*l.*, and was carried out by Messrs. Jones & Son, of Newport.

Peckham.—It is proposed shortly to erect a large place of worship for the Baptists of Camberwell and Peckham, to be called the "South London Tabernacle." The site is in Peckham-road, midway between Camberwell Green and Rye-lane, with frontages to the main road and Shenley-road.

STAINED GLASS.

Dumfries.—A stained glass window in memory of the late Dr. Russell, of Holmhill, Thornhill, has been placed in Morton Pariah Church by Mr. James Fingland, of Wavertree, Liverpool, who was associated with Dr. Russell for a long period. The window, which is 24 ft. high and 5 ft. wide, forms the centre of a triplet, and contains three subjects: (1.) "Dorcas distributing Food and Clothing to the Poor;" (2.) "The Good Samaritan"; and (3.) "Our Lord restoring Sight to the Blind." The figures, which are nearly life-size, were designed and executed by Messrs. J. A. Forrest & Son, of Liverpool.

Cheltenham.—Two stained-glass windows, presented for erection in the chancel of the old parish church, are now finished, and have been formally handed over to the rector. The windows are presented, the one by the Freemasons of the town, and the second by workmen and others in memory of the late Mr. D. J. Humphris, for many years churchwarden of the parish. The Freemasons' window is the large east window, the contract for which was entrusted to Messrs. Lavers, Barraud, & Co.; its cost was 350*l.* The five main lights of the window illustrate incidents of the Saviour's Life and Passion; the upper lights contain figures of New Testament saints, and the lower apertures characters from the Old Testament whose names are traditionally associated with masonry. The window erected to Mr. Humphris's memory will be on the north side of the chancel, and being by the same firm, will correspond with the larger one in tone.

Sparkbrook.—A stained-glass window, the work of Messrs. Camm, Brothers, Birmingham and Smethwick, has just been placed in the west end of Christ Church, Sparkbrook, to the memory of the late Mr. Thomas Simcox. The subject is that of "Paradise Lost and Regained."

St. Vigeans, N.B.—A stained-glass window from Munich has just been placed in the chancel of the parish church of St. Vigeans, to the memory of the late Mr. James Lindsay, North Tarry. The subject is the Ascension. This is the last of a series of five windows representing the chief events in the life of Christ, the first of which, however, still remains to be placed.

Salop.—The east window of the church of King Charles the Martyr, near Wem, Salop, has just been filled with stained glass from the studio of Mr. Charles Evans, of Fleet-street. The subjects represented are,—the "Baptism," introduced in the left-hand light; the "Crucifixion," in the centre; and in the right-hand light the "Resurrection." Emblems of the Passion are introduced into the ornament of the bases. The painted window formerly in the east has been renovated, a fresh subject ("Beheading of John the Baptist") having also been added, and the whole introduced into the west window, by the same artist.

Ascot.—A three-light window has lately been erected in the chapel of St. George's School, Ascot. The window, which is at the east end, is treated in monochrome, the subject represented being the "Good Shepherd." The side-lights are filled with ornament, into which different emblems are introduced. The window has been executed by Mr. Charles Evans.

Miscellanea.

The Hudson River Tunnel.—This great work, so long delayed by litigation, is now being pushed vigorously forward, under the direction of Mr. D. C. Haskin. The method presents various interesting features. A vertical shaft was first sunk to the level of the roadway of the tunnel, 60 ft., at the foot of Fifteenth-street, Jersey City, but the work towards the river was started at about half the depth (as a temporary convenient device), and the bottom of the shaft is at present used as a receiving cistern for water and silt. In building the tunnel compressed air is used to keep out the water and partly to uphold the earth, the air-pressure being now 17 lb. to 20 lb. per square inch. The shell of the tunnel is an iron cylinder about 22 ft. high by 20 ft. broad, made of boiler iron, and worked forward in sections, a small segment being first dug out at the top, and plates placed in position, bolted, and braced, before the earth below is taken out. The work is thus advanced in sections (four to eight), the face of the ground presenting so many steps. A wall of hard-burnt brick, laid in cement, and 2 ft. thick, is formed within the outer shell. These operations are aided by the electric light. There are three sets of workmen, each set composed of about forty men, and working eight hours daily, so that the work proceeds day and night. The present rate of progress is 3 ft. of finished tunnel per day. It is expected the tunnel will be complete in three years. It is designed to have two tunnels side by side under the river, these being carried into one larger tunnel at the shore ends. The estimated cost of the tunnel is about $10,000,000.—*Times.*

Technical Education in Yorkshire.—The ceremonial opening of the new Textile Industries and Dyeing Department of the Yorkshire College, Leeds, erected at the cost of nearly 15,000*l.* by the Clothworkers' Company, has been postponed until October next; but in the meanwhile the work of the various classes has been organised and commenced. The laying of the memorial stone of the new Technical School at Bradford is to take place on the 16th of June. The cost of the building and site will exceed 15,000*l.*, towards which the Clothworkers' Company subscribe 3,000*l.*——A new building for the Technical School at Huddersfield will shortly be commenced. 10,000*l.* and upwards has been already subscribed or promised by the merchants and manufacturers of the town and neighbourhood, and to this the Clothworkers' Company have just promised an addition of 2,000*l.*—*City Press.*

Oakham.—The scheme of the trustees for additional school buildings has received the sanction of the Charity Commissioners, and the work has been commenced. The new buildings will be in the rear of the present school-house, which fronts to the Market-place, and will form a fourth side to the quadrangle. The contractor is Mr. Hayes, of Melton Mowbray, and the architect is Mr. Tait, of Leicester.

The Employers' Liability Bill.—A large and influential deputation of employers waited upon Mr. Gladstone, on Wednesday, to make representations respecting the Employers' Liability Bill, now before Parliament. Among the bodies represented were the London Builders' Association and the National Association of Master Builders of Great Britain. Mr. Hannen, on behalf of the building associations, predicted as the result of the Bill a feeling of antagonism and much acrimonious litigation between employers and employed. The doctrine of common employment would be destroyed, and masters would be made responsible for the negligence of workmen towards each other. Now, he entirely failed to see the justice of such an enactment. Supposing in a private house the butler told the footman to mount a pair of steps which were insecurely placed in order to light the drawing-room gas, would it be fair to hold the master of the house responsible for the consequences? He was confident that the principle of the Bill, when applied in that way, would never be sanctioned by the House of Commons. Other speakers, representing various interests, having been heard, the Prime Minister assured the deputation that their representations, particularly as to a proposed system of insurance, would receive the careful attention of the Government, and that the Bill would, as they seemed to desire, be referred to a Select Committee.

The Late Professor Ansted.—We regret to record the death, on the 13th ult., of Professor David Thomas Ansted, F.R.S., the well-known geologist, aged 66. He will be well remembered as having given a great deal of attention to building stones. In 1840 he was appointed to the professorship of geology in King's College, London. Five years later he became lecturer on geology at the Civil Engineering College at Putney. About the same time he was made assistant secretary to the Geological Society, whose quarterly journal he edited for many years. From about 1850 down to a very recent date he was extensively engaged in the application of geology to engineering works, and to various other departments of industry.

St. Margaret's Church, Lee, Kent.—The decorations to the sanctuary of the chancel of the above church have just been completed by Messrs. Cox & Sons, of Southampton-street, Strand. The groined roof of the ceiling of the sanctuary has been gilded, and the north and south walls have been painted and decorated in diaper work, with a painted angel in the upper panel on either side. The marble reredos has been continued on the side walls in inlaid mosaic marbles of different kinds, including Derbyshire spar. The other work which has been done by the same firm includes a stained-glass window representing the Baptism of our Lord, which has been introduced over the door of the baptistery.

Crystal Palace.—Handel Festival.—The Seventh Triennial Handel Festival, which will be celebrated at the Crystal Palace on the 21st, 23rd, and 25th of June, with the public rehearsal on the 18th inst., promises to be as successful as the festivals which have previously taken place. Sir Michael Costa, who has never been absent from a Handel Festival, will conduct; and never has a stronger, never has a more varied list of solo artistes been brought together than for the coming festival.

West Moulsey School Board.—In a limited competition the design of Mr. T. Goodchild, architect, Adelphi, having been selected, and afterwards approved by the Education Department, that gentleman has been appointed architect to the Board.

Hollington Stone Company.—A limited company is in course of formation to purchase and work quarries of Hollington stone, a very good material. Particulars will be found in our advertising columns.

TENDERS

For the erection of a pair of semi-detached villas at Clacton-on-Sea for Mr. J. Yelloby Watson. Messrs. Ebbetts & Cobb architects. Quantities supplied by Messrs. Hodgson & Mundy:—

Davey, Clacton-on-Sea	£2,378 0 0
Dupont, Colchester	2,180 0 0
Dobson, Colchester	2,180 0 0
A. & E. F. Canter, Clacton-on-Sea	2,103 0 0
Riches, Great Clacton	2,150 0 0
Everett & Son, Colchester	2,089 0 0
Saunders & Son, Dedham	2,085 0 0
West & Perkins, London	1,879 0 0
Forshaw, Clacton-on-Sea	1,854 0 0

For the erection of shops and offices, in Cannon-row and Derby-street, Westminster, for Sir Sydney H. Waterlow, bart. Messrs. E. T. Hall and Henry A. Hunt, joint architects. Quantities by Messrs. Linsdell & Giffard:—

Patrick & Sons	£3,983 0 0
Bangs & Co.	3,963 0 0
Longmire & Burge	3,958 0 0
Toms	3,937 0 0
Colls & Sons	3,924 0 0
Brass	3,787 0 0
Nightingale	3,697 0 0
Adamson & Sons (accepted)	3,394 0 0

For the erection of parish church, at Four Elms, Kent, Mr. Edwin T. Hall, architect. Quantities by Messrs. Evans & Deacon. Preliminary contract:—

Julian & Co.	£3,110 0 0
Durtnell	2,723 0 0
Wallis	2,567 0 0
Punnett & Son (accepted)	2,471 0 0
Constable (withdrawn)	2,344 3 0

For the restoration of St. Nicholas Church, at Wells-at-Sea. Mr. Herbert J. Green, architect. Quantities by Mr. S. Tucker:—

Lacey	£8,791 0 0
Hubbard	8,472 0 0
Parmenter	8,410 0 0

For the erection of a private residence, Lansdowne-road, Brighton, for Mr. F. Algar. Mr. H. J. Lanchester, architect:—

Chappell	£3,130 0 0
Webber & Son	3,000 0 0
Nurcombe	2,987 0 0
Chessman	2,974 0 0
Garrett, Brothers	2,960 0 0
Barnes	2,944 0 0

For the erection of warehouses, corner of Hatton-garden and Clerkenwell-road, for Mr. A. P. Welch. Mr. W. H. Powell, architect:—

Manley	£6,170 0 0
Shaw	5,383 0 0
Patman & Fotheringham	5,287 0 0
Clemence, jun.	5,185 0 0
Colls & Sons	5,088 0 0
Langmead & Way	4,950 0 0
Morter	4,940 0 0
Brass	4,939 0 0
Kirk & Randall	4,860 0 0

For a partly half-timber and brick house on the Buxton-road, Leek, for Mr. W. S. Braigh. Mr. W. Larner Sugden, architect. Quantities by the architect:—

Bricklayer, Mason, Tiler, and Plasterer's Work.

Bailey (too late)	£331 15 0
Grace	469 10 0
Knowles (accepted)	450 0 0

Carpenter and Joiner's Work.

	In Teak.	In Memel.
Mackrell	£445	£325
Joseph Hudson	438	349
James Hudson	411	—
Green & Hall	395	365
Wood	380	330
Carding (accepted)	375	295

Messrs. Matthews, Nixon, Bailey & Morris, Jas. Heath, Moores, Sutton, Bromage, Cooke, and Nowell, too late.

Plumber, Glazier, and Painter's Work.

Stevenson	117 18 6
Phillips	106 15 0
Heath	96 0 0
Carding (accepted)	93 0 0

For Warehouse in Bishop's-court, Old Bailey. Mr. George Vickery, architect:—

Hart	£1,787 0 0
Dove Bros.	1,595 0 0
Colls & Sons	1,498 0 0
Lawrence	1,487 0 0
Brass	1,426 0 0
Crabb (accepted)	1,400 0 0

For Walthamstow schools, for Rev. E. Bullinger. Messrs. W. G. Habershon & Fawckner, architects:—

D. C. Jones & Co., Gloucester	£1,434 0 0
Staines & Son, Great Eastern-street	1,274 0 0
Good Bros., Walthamstow	1,270 0 0
Allen, Kilburn Park-road	1,246 0 0
Jones, Dunlace-road, Clapton Park	1,200 0 0
Abbot, Silvester-road, Walthamstow	1,188 0 0
Hooper, Lowden-road, Herne-hill	1,175 0 0
Judd, York-road, Grove-road	1,134 0 0
Haynes, Alferton, Harrow	1,100 0 0
Beale, Totteridge-road, Battersea	1,098 0 0
Garrad, Spitalfields	1,083 0 0
Castle, Redcross-street	1,047 0 0
Gregar, Stratford	937 0 0
Amey, Walthamstow	750 0 0

For new City of London School. Messrs. Davis & Emanuel, architects. Quantities supplied by Mr. F. Downing & Mr. H. P. Foster.

Contract No. 1.—For Foundations.

	With use of wharf on site.	Without use of wharf on site.
Smith & Co.	£7,323	£7,543
Conder	6,990	6,990
Dove, Brothers	6,685	7,735
Ashby Brothers	6,614	6,614
Cubitt & Co.	6,270	6,373
Macey & Sons	6,230	6,430
J. Grover	6,224	6,544
Peto Brothers	6,194	6,453
Trollope & Sons	5,983	5,983
Shaw	5,831	6,269
Mowlem & Co.	5,788	5,987
Morter	5,699	5,896
Holland & Hannen	5,553	6,398
Colls & Sons	5,473	6,062
Hill & Higgs	4,644	5,440

For Warehouse No. 44, London-wall. Mr. E. Saunders, architect:—

	£2,398 0 0
Colls	2,386 0 0
Staines	2,360 0 0
Pritchard	2,312 0 0
Woodward	2,296 0 0
Crabb	2,253 0 0
Sabey	2,241 0 0
Brass	2,074 0 0
Lurke	

For the erection of fifteen cottages, at Gales-gardens, Bethnal-green. Messrs. A. & C. Harston, architects:—

Wire	£5,150 0 0
Beale	4,953 0 0
Thomerson & Son	4,950 0 0
Sharman	4,650 0 0
Moyle & Son	4,585 4 8
Wood, B. T.	4,531 0 0
Wood, T. & T. J.	4,500 0 0
Palmer	4,499 0 0
Johnson (accepted)	4,349 0 0
Parrish	4,317 0 0
Boulter & Lee	4,047 10 0

For new folding-room, and other additions, to the laundry at the Stepney Union workhouse, Bromley-by-Bow, for the Guardians. Messrs. A. & C. Harston, architects:—

Parrish	£310 0 0
Johnson	297 0 0
Derby	283 0 0
Heiser (accepted)	272 0 0

For alterations and repairs to lifts, at the Kensington Infirmary, Marloes-road, for the guardians of St. Mary Abbotts, Kensington. Messrs. A. & C. Harston, architects:—

Bunnett & Co. (accepted)	£94 10 0

For road-making and ground work, at the Village Home, Banstead, for the managers of the Kensington and Chelsea school district. Messrs. A. & C. Harston, architects:—

Crockett (accepted)	£3,000 0 0

For villa residence in Wickham-road, Brockley, S.E., for Mr. J. Wighton. Mr. J. A. Abbott, architect. Quantities supplied by Mr. G. Jackson:—

		Extra for red facings.
Downs	£1,466 0 0	£16 0 0
Shaw	1,413 0 0	59 0 0
Brass	1,398 0 0	67 0 0
Julian & Co.	1,375 0 0	34 0 0
Nichols	1,345 0 0	20 0 0
Tyerman	1,336 0 0	45 0 0
Downs & Co.	1,336 0 0	34 0 0

Revised Tenders.

		Allowed for Concrete.
Downs	£1,196 0 0	£36 0 0
Tyerman (accepted)	1,195 0 0	23 0 0
Nichols	1,194 0 0	19 0 0

For the erection of Stockwell Orphanage for girls, for the trustees. Mr. A. Wright, architect. Quantities by Messrs. J. E. Goodchild & Son:—

		Extra for Plate-glass.
Smith	£12,971 0 0	£172 0 0
Rice	12,435 0 0	138 0 0
Dove, Brothers	12,375 0 0	255 0 0
Patrick & Son	11,760 0 0	200 0 0
Brass	11,683 0 0	177 0 0
Rider & Son	11,658 0 0	184 0 0
Hart	11,598 0 0	196 12 0
Croaker	11,577 0 0	129 0 0
Nightingale	11,483 0 0	145 0 0
Thomson	11,420 0 0	165 0 0
Tarrant & Son	11,470 0 0	182 0 0
Peto, Brothers	11,085 0 0	160 0 0

For taking down house in Seymour-place, Northampton, and part taking down the present Independent chapel, in King-street, Northampton, adjoining, and enlarging and reconstructing King-street Chapel on the site, using the old materials from house and chapel, and making good with all new materials required. Mr. S. J. Newman, architect. Quantities supplied:—

Barlow	£1,997 0 0
Dunkley	1,921 0 0
Cosford	1,890 0 0
Hawten	1,881 0 0
Harris & Wardrop	1,875 0 0
Branson	1,756 0 0
Green, Brothers	1,733 0 0
Underwood	1,630 0 0
Heap	1,600 0 0
Basford	1,589 0 0
Hall	1,560 0 0
Ireson	1,529 0 0

For the erection of additions to Ascham House, Bournemouth. Mr. Alfred R. Pite, architect:—

Wagstaff & Son	£1,398 0 0
Falkner	1,327 0 0
Cowland, Brothers	1,288 0 0
Patman & Fotheringham	1,186 0 0

For the erection of the Railway Hotel, Brixton Station, for Mr. F. Allen, of the Brixton Brewery, bar-fittings excluded. Mr. R. Cruwys, architect. Quantities by the architect:—

Maxwell, Brothers, Brixton	£3,130 0 0
Haydon, Brixton	3,060 0 0
Candler, Brixton	3,020 0 0
Pack, Brothers, Brixton	2,975 0 0
Rice, Clapham	2,763 0 0
Macey, Brixton (accepted)	2,763 0 0

For the erection of two new houses, Dunstan's-road, Honor Oak, for Mr. P. Roberts. Mr. R. Cruwys, architect:—

Pickersgill, Brothers, Soho	£1,245 0 0
Buckland, Brixton	1,159 0 0
Rice, Clapham	972 0 0
Simons, Brothers, Brixton *	960 0 0
Macey, Brixton	935 0 0

* Accepted at £955.

For additions to stables, North-row, Earl's-court, for Mr. A. Savignar. Mr. George Edwards, architect:—

Martin, Wells, & Co. (accepted)	£437 5 0

For alterations to the Prince Teck public-house, Earl's-court-road, for Mr. A. Savignar. Mr. George Edwards, architect:—

Martin, Wells, & Co. (accepted)	£375 0 0

For the erection of a coffee tavern, at Seal, Kent, for Mr. C. G. Hall. Mr. E. T. Hall, architect:—

Julian & Co.	£1,025 0 0
Constable (accepted)	950 0 0

Dwelling-house, Booth-street.—Mr. G. Crabb, Kingsland Green, wishes it stated that the tender for 1,950*l.* was not made by him.

TO CORRESPONDENTS.

J. S.—G. H. B.—J. U.—C. E.—L. & W.—E. F. B.—C.—J. D. & Son.—W. W. L.—Mr. L.—C. & S.—A. & C. H.—E. & C.—A. S. J.—R. C.—F. C.—D. I.—E. H. L. B.—A. H.—E. H.—A. R. P.—H. P. F.—W. G. H.—E. B.—W. P.—J. P.—W. C.—R. W.—F. & B.—R. C.—A. W.—Mr. T.—H. H. (we shall be glad to receive drawing for photo-lithography)—B. S. B. (next week).—A. J. F.—J. D. S.

All statements of facts, lists of tenders, &c. must be accompanied by the name and address of the sender, not necessarily for publication.

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